

Manufacturers Record

Industry Construction

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BALTIMORE, MD.

JULY 28, 1932

Tax Assessment Reduction

Reduction in tax rates by local governments has brought a measure of relief to many over-burdened tax payers. But where assessment figures remain at peak boom-time levels, there is still room for a more equitable adjustment of the tax basis. Property assessments set by taxing authorities before 1930 are entirely out of line with present day values and although it might be inadvisable to adopt the minimum figures that real estate is now bringing there should be a just middle ground which would be fair to the tax payer and to the local government.

Inequality of assessments through political pull or lack of knowledge on the part of the tax assessing bodies as to the fair value of the property which has been over-valued is being criticized in communities everywhere.

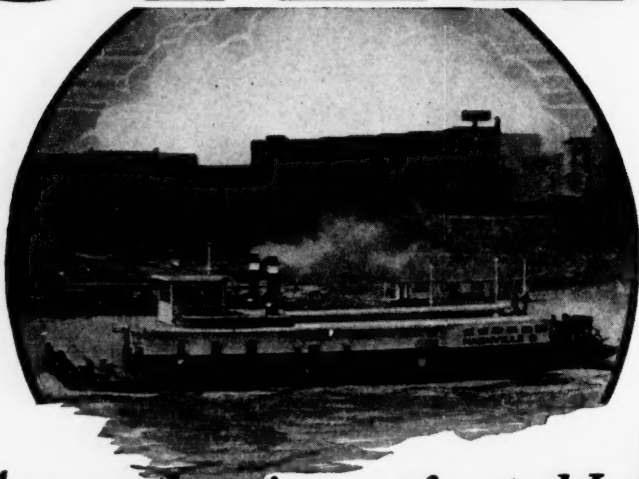
Home owners who have seen their assessments raised over a period of years under the stimulus of inflated conditions are demanding that expenses of local governments be drastically reduced. The abolishment of unnecessary and superfluous offices, the reduction of salaries and saving in every direction are being asked.

Owners of business property, likewise, are finding that a small reduction in the tax rate while the assessment remains practically at peak values brings little relief and the burden is being carried at a time when business shows practically no profit.

The movement to give prompt consideration to this phase of the tax problem should grow. Schedules are being revised downward and while many communities have already adopted the plan of permitting taxes to be paid in installments, this also should be generally extended. In some communities payments are permitted weekly, monthly or quarterly. It has been found of distinct help, to the city in making collections as well as to the individual and business enterprise.

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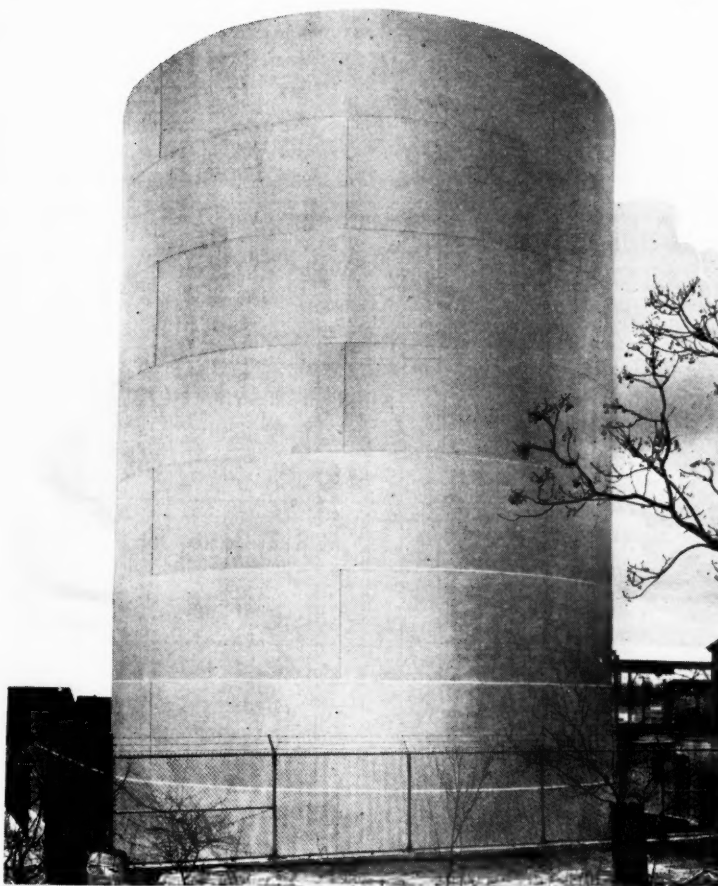
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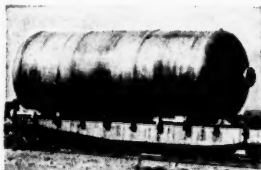
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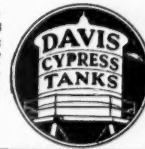
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Vol. CI No. 30 }
Weekly }

BALTIMORE, JULY 28, 1932

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Chemical Industry Requirements

WITHIN recent years, as the MANUFACTURERS RECORD has frequently emphasized, there has been a rapid growth of the chemical industry in the Southern states. Based on available resources and the present development trend, prediction is made that this section will become the dominant chemical manufacturing region of the United States. Some of the great plants of the country are being established, utilizing raw materials, creating employment and adding to the wealth of the South. The importance of this movement is recognized, but perhaps the South is not fully aware of the wide ramifications of the chemical industry and what this activity means to other industries in obtaining new outlets for their materials, machinery, equipment and supplies. These new chemical plants are developing immense buying power and have become customers of widely diversified industries.

This fact has been brought home to those who attend the annual chemical expositions. At the 1931 exposition held at the Grand Central Palace, in New York, there were approximately 360 exhibitors representing the chemical industry which has an annual production valued at about \$3,000,000,000.

To turn out this volume of business the chemical industry necessarily requires specialized machinery and equipment, but it is not generally appreciated what a great variety of other supplies are used. In the construction of new plants which has been pronounced in the South in the past five or six years, essential materials used are practically the same as those required for any other industrial structure. Obviously, power plant installations for general manufacturing are available also for the factory making chemicals. In the realm of general equipment may be cited many types of machines. For instance, nearly all chemical industries require pulverizers at one step or another in their operation. The mills are designed to crush anything crushable, from acetanilid

and alum, through carborundum and cement, flint, iron turnings, kaolin, quartz, rubber, talc, tobacco and tungsten.

In the past few years great progress has been made through research in colloidal chemistry, with the result that colloidal solutions and suspensions are used in an ever-increasing number of industries and processes. Colloid mills accordingly find use in colloid dispersions, dispersions of solids, vat dyes, paper pulp and other productions, and for the emulsification of resins, waxes, oils, water paints and fruit juices.

Naturally, laboratory equipment is essential in chemical manufacturing. Thus, microscopes and other optical instruments are needed. For use with a list of chemicals ranging through the alphabet from acetic acid to zinc sulphate, there may be cited rubber goods, glass equipment, retorts, thermometers, wire gauge, balances and scales and other necessities for laboratories.

Recent years have seen tremendous progress in the chemistry of metallurgy. The enormous losses due to corrosion have set up a challenge that the metallurgist has met with a great measure of success. Special alloys of steel have come on the market, inasmuch as a long list of exacting industrial demands have exposed steel to the weather, to the terrific exactions of high temperatures and to corrosive chemicals. Included in the special steel alloys are chrome-nickel, stainless and heat resisting steel and rustless iron, and some of the rarer useful metals and alloys include molybdenum, tungsten, tantalum, vanadium and platinum.

In addition to the corrosion-resisting metals there are stoneware products. At the Chemical Exposition last year there was displayed a new quick-setting, chemically resistant cement having a tensile strength in 24 hours of 1700 pounds per square inch; also fused silica, hard rubber and glass.

Conservation of heat plays an important part in chemical manufacturing. For this purpose there are instruments for watching over the heat generated, indicating preventable losses and automatically controlling temperatures. Temperature control instruments, like much of the equipment mentioned, are used in scores of general industrial processes.

Many variations of pumping equipment are available for the chemical industry—pumps for handling waste, for pumping the white water from flat boxes in paper mills, for vacuum cleaning and dust recovery.

Pulverizers and equipment for spray-drying liquids are required for many and varied chemical uses. Potato flour, used for white bread and made from baked potatoes is one of the products of the new spray-drying process now in use. The same method is being applied to other vegetables and to fruits in an experimental fashion, with interesting results apparently in sight.

Filtration in one form or another is an essential step in many industries and there are filters covering an immense range of capacity and type.

All kinds of equipment for filling, sealing, weighing, conveying, labelling and packaging the output of industry are required. From cloth and paper sacks, through wooden tubs and barrels, glass bottles and jars, new plastic closures and so on they range to large steel drums. Cloth sacks coated inside with rubber; tough paper sacks; waterproof, paper-lined, cotton and jute bags; glass containers, from small medicine and perfume phials to five-gallon carboys in wooden crates; stoneware crocks and jars and even rubber containers all have their place in packaging the products of the chemical industry.

The fact that the newsprint industry stands a good chance of being revolutionized in the near future, and that much cheaper wood pulp for paper will be obtainable has been demonstrated. Recent experiments have shown that slash, longleaf and loblolly pines grown in the South, and considered unsuitable for paper pulp, through a new discovery can now be converted into paper quite comparable with that made from the usual Northern and foreign spruce.

Rubber from golden rod, grown in abundance in the South, and rubber from acetylene may be commercially possible soon.

The manufacture of synthetic rubber from petroleum is another new departure being discussed. As the South produces 63 per cent of the country's petroleum output, it is interested in all developments that will lead ultimately to an increased consumption.

The South has enormous resources of coal, lignite, petroleum, natural gas, salt, sugar, and other raw materials for the development of chemical industries of great variety. It has been producing alcohol from molasses for several years, and bagasse, the waste of its sugarcane grinding industry, is said to be a valuable source for cellulose. In the future, cotton may be grown for its cellulose content. Only recently, research has proved that gasoline can be made from cottonseed which now is the raw material for many chemical products.

What Observant Travelers Think of the South

A BALTIMORE bond salesman covering the East has just returned from a special business trip through the Central South. He found conditions encouraging, money available for sound securities and was more impressed than ever that the depression had not affected the South so deeply as the larger centers of the East. He reports the better spirit prevailing in part due to the prospects of a smaller cotton crop and higher prices.

Following a motor trip to California "in order to get an industrial perspective of the country," a correspondent of *Class & Industrial Marketing*, makes these observations about the South after covering the route leading through Knoxville, Chattanooga, Atlanta, Montgomery, Pensacola, New Orleans, Houston, Galveston, San Antonio and El Paso.

"I have felt ever since I used to get around the country for Fairbanks Morse that we of the industrial Northeast attach too little significance to these sections and their relation to Northern merchandising.

"They offer a potential consumption for all types of heavy merchandise that is enormous.

"In Texas their crops look as though they had followed more normal methods and their outlook is cheerful.

"From an industrial standpoint the South and West always have operated in a large way in a basic industry and will continue to do so. Their so-called small business men are better business men than ours. Their integrity is of a high order and their collateral is high class.

"If I were controlling a steel company or any heavy machinery or materials enterprise and were in position to extend credit I would ship into these regions as long as they would take it, and I wouldn't worry about getting my money.

"They don't take to receiverships in these industries; they tighten their belts and work it out. Their resources are enormous and all they need is credit.

"The automobile builders I imagine must feel the same way about it. You see a great many new cars in these sections."

Such testimony as to the part the South occupies in the nation's business life adds to that previously given, and published in these columns some weeks ago, by General R. E. Wood, president of Sears, Roebuck & Co., and Clinton B. Allsopp, vice-president of the Postal Telegraph Cable Company, New York, following their visits to the South.

Latin American Trade

THE world-wide depression is responsible for practically all of the 50 per cent decline in our trade with Latin American countries. Analyses by the Department of Commerce indicate that not more than 10 per cent of the loss is attributable directly to the tariff act.

Another fact that needs to be emphasized is that virtually every product shipped from the United States to Latin American countries pays a high rate of duty, while practically 75 per cent of the imports from Latin America entered the United States duty free.

Building Industry's Responsibility

THE campaign for "Firm Bidding and Fair Dealing" which the MANUFACTURERS RECORD has been making in order to arouse the building industry to its responsibility for bringing about more stable conditions has been widely commended. J. R. Oettinger of the Oettinger Lumber Company, Greensboro, N. C., referring to the campaign, "and for which the building industry owes you so much," says that it is almost an impossibility for sub-contractors to maintain a "Firm Bid" and secure any business at all.

The responsibility rests with everyone connected with the building industry. No special group is more to blame than any other in this buyers' market when producers and sellers of goods in order to keep their forces together are willing to ignore costs in meeting competition.

To overcome the ruinous practice of price-cutting which has grown to alarming proportions in the past two years, it is suggested that the only way beneficial results can be secured is that it should be made mandatory for architects and owners to require that sub-contractors be named at the time the general contract is submitted. In the end, such a policy would help to stabilize the construction industry. The contractor who forces prices below cost of production and the bidder who accepts such prices are both to blame for undermining the construction industry.

In as much as most of the construction now offered is government work, it would seem that the government should require with the general bids the names of sub-contractors upon whose estimates the general bid is based, the same as the government now requires that wages be paid in accordance with the standard wage of a particular territory, in which the job is undertaken. The government has thus given protection to the construction worker but how much more important is it to protect suppliers of materials and equipment in the building industry and the wage earners employed, by helping to rationalize bidding practices. Surely the government does not wish the building industry to continue doing business without a profit. Business must have a profit if the government is to continue to collect taxes. The pernicious bidding and price-cutting practices now being followed mean bankruptcy for more than the building trades.

Marking Foreign Goods

A STEP in the right direction was taken by the Bureau of Customs in ruling that each steel bar imported into the United States for use in reinforcing concrete work must be marked with the name of the country in which it is made. There is a keener realization that every foreign product sold in this country means that much less in wages to an American worker. People should be given the opportunity to know when they are being offered goods made abroad.

The Sound Way Back

THERE is no evidence that prosperity will come by way of a sudden business spurt, but there are evidences that the tide has turned. Of course, buying must increase before business will show any material pick up. The trend toward activity after a decline is usually imperceptible at the beginning, and as has been remarked, that is the reason why revival will be on the way before most of us will be aware of it. But the foundation of prosperity is being slowly built up because we are readjusting ourselves more and more every day to present conditions.

Thousands of people have returned to farms where their first concern has been to secure food and shelter. It is said that in some parts of the South not a vacant farm house can be found, and small farms which have been abandoned for years are being cultivated.

All over the nation one-man industries and one-man farms are starting again on a deflated basis. The occupants of these farm homes are producing their living, are helping to ease the load of charity organizations which supported many of them last winter, and are gradually making a little surplus. Individually the extra spending money derived from each family's surplus is only a drop in the amount needed to revive business, but as the amount increases the spending of it in the aggregate will help to start the wheels of industry, for these former industrial producers have become consumers of factory products.

As the movement gains momentum it is being felt in the small places and by small concerns, and from there will spread into the great industrial centers.

The Public Pays

ACCORDING to L. A. Downs, president of the Illinois Central System, the Railway Valuation Act of 1913 cost the people of the United States approximately \$185,000,000, reminds the Industrial News Review. Mr. Downs is quoted as saying that in the beginning, proponents of the act guessed that the railroads could be valued in two years; that the total cost would be less than \$3,000,000; that the railroads would be shown to be greatly overcapitalized; that the Government would be able to regulate rates so as to yield the railroads a fair return; that the users of transportation would save \$1,000,000 a day.

The facts, produced in the past 18 years, are: The valuation has not been completed; cost to taxpayers has been more than \$40,000,000 and to railroads \$145,000,000—a cost which has necessarily been reflected in railroad rates; the value of the lines has been determined as substantially greater than their capitalization; the railroads have not earned a fair return, and no public saving has resulted.

Comment is made that political "guesses" are expensive for the taxpayers, and that the public, not the "guessers," pays the cost.

A Modern Passenger Train

All Passenger-Carrying Cars of Chesapeake & Ohio Railway's New Train Are Air Conditioned

The Chesapeake & Ohio Railway Company has placed in service its new train, the "George Washington," which is equipped with an air conditioning system as an integral part of each passenger-carrying car, providing pressure ventilation, air cleaning, cooling in summer and heating in winter, and humidifying or dehumidifying the air as required. Valet, buffet, and radio service facilities further provide for the convenience of the passengers. The total equipment consists of 22 Pullman sleepers and lounge cars, 3 C. & O. dining cars and 3 C. & O. "imperial salon" cars.

The "George Washington" was designed to represent the last word in passenger train service from New York via Washington and Cincinnati to St. Louis and Chicago, and to represent the acme in traveling comfort.

A maximum of convenience and comfort in the restaurant cars is provided by the air cooling and conditioning system. Heat and odors from the kitchen do not reach the diners. The "imperial salon" cars assure comfortable traveling facilities for those not desiring Pullman accommodations. Cars of this type were introduced initially on the C. & O. "Sportsman," which went into service a little more than a year ago. These cars are arranged to seat 45 persons. Heavily upholstered individual seats, which may be turned round at will, are provided. An

individual reading light is provided for each chair. Elaborately furnished rest-rooms and smoking cars are a feature of "imperial salon" type cars.

The air-conditioning system on the new train was developed by the Pullman Car Mfg. Corp., the installation work being handled at the Pullman Car Works, Pullman, Ill. For the sake of flexibility, the equipment is installed as a unit for each car and is practically automatic with thermostatic controls for both heating and cooling. Due to the location and type of ducts and outlets it is said that uniform air distribution is made possible without drafts. Noise is minimized by eliminating the need for open doors, windows or ventilators. Excess moisture is removed from incoming air by condensation on the cooling coils and dry air, when heating, is humi-

dified by means of a small steam jet automatically controlled.

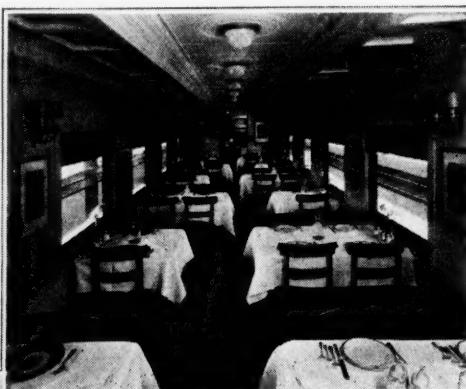
Freon or F-12, a refrigerant made by the Kinetic Chemical Company, Inc., a subsidiary of E. I. du Pont de Nemours & Company, is used. The circulated air is cooled directly without the use of any intermediate brine cooler and pump, thus increasing, it is said, the efficiency of cooling by about 50 per cent. The condenser is air cooled; there is thus no danger from freezing. The entire system is designed so that a minimum amount of equipment is necessary, and the unit is safe, efficient and easy and accurate to maintain.

When the train is standing at yards or stations the only type of power required is provided by a stand-by motor which can be plugged into any convenient source of electric power. When the cars are in motion power for operating the system is transmitted from one of the truck axles without the use of electric generator and motor. No additional storage battery capacity is needed, as the only power requirement not provided for in the main drive is for a small $\frac{1}{4}$ -horsepower electric motor which drives the fans for the main air-circulation system and takes current from the car-lighting battery.

When heating is required in the car, the cooling system ceases to function and steam vapor from the train line is circulated through the coil.

One of Three Diners

In harmony with the idea of the "George Washington" the diners are named after three celebrated colonial taverns, and are appropriately furnished.



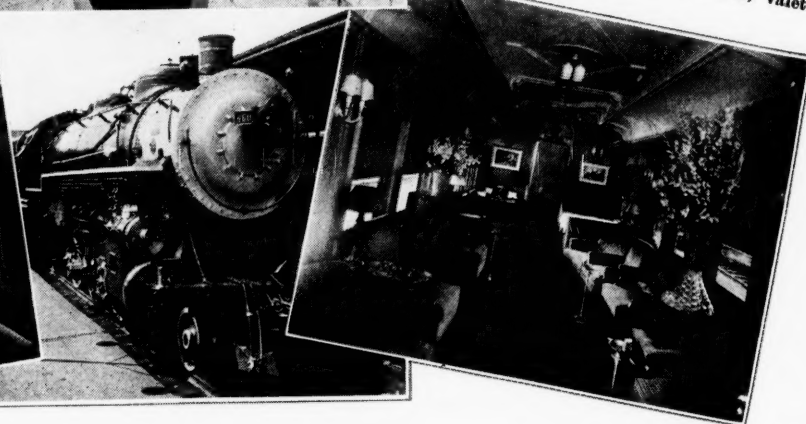
Salon Car Replaces Day Coach

The interior of the C. & O. de luxe coach shows the improved seating arrangement and interior decorative treatment. The air outlets of grilles are in the ceiling.



Lounge Car

The library-observation-lounge cars provide such luxuries as buffet, valet service, and radio.



Trends in Shipping Container Design and Construction

As one of the greatest lumber and fiberboard producing sections of the country, the South is particularly interested in the modern trend in shipping container use, design and construction. Wood and fiber are the dominating materials used in the making of containers, but there have been marked changes in the industry in recent years due to the changes in social and industrial life and merchandising methods requiring containers of light weight and smaller units.

In discussing "Trends in the Shipping Container Industry," C. A. Plaskett of the Forest Products Laboratory, Madison, Wis., calls attention to the fact that while the quantity of lumber used for boxes and crates has not changed appreciably in the past 20 years, the amount of material used for fiberboard boxes and crates has rapidly and steadily increased since 1907. The wooden container for heavy loads continues to be used almost exclusively. Wirebound and plywood boxes appear to offer possibilities of competing with the fiber box on a weight basis. Both of these types of boxes are made largely from rotary-cut veneer, requiring high-grade logs. If low-grade material can be utilized, it is believed production costs can be lowered to meet the competition of the cheaper fiber container.

Mr. Plaskett further discusses the subject in part as follows:

Factors Influencing Trend of Container Use

The increase in railroad tonnage of package goods has required an increasingly large number of containers. From an examination of the curves representing the production of wooden and fiber boxes, it appears that the fiber box has taken the equivalent of practically all of this increase in container business and the wooden container has barely held its own. One of the most important factors that has aided in the expansion of the number of boxes used, aside from the normal increase due to increased tonnage of merchandise, is the change in our social life. The migration of population from rural to urban centers has brought about changes in our civilization that have had a direct influence on the shipping container industry. Modern life in our cities means,

to many, living in small apartments. The number in a family is smaller and often the wife is a wage earner. Lack of storage space and the desire for variety make it necessary to purchase supplies in small lots. Such conditions have brought about a necessary change in merchandising methods. One of the greatest changes and advancements has been the transition from bulk sales to package sales.

This revolution of packaging merchandise for hand-to-mouth buying has created a great demand for small, light-weight shipping containers. The fiber container, because of its light weight and low cost, has obtained a large share of this business and is likely to continue to expand its use unless the trend is changed by further drastic changes in the present freight rate structure or in merchandising methods.

Requirements of Shipping Containers

The principal requisites of a shipping container are light weight, low cost, and ability to withstand the rough usage incident to transportation and at the same time protect its contents against loss or damage.

The strength requirements of shipping containers are continually changing with changes in transportation and handling methods. In most instances changes in transportation and handling methods have reduced the strength requirements of shipping containers. New transportation facilities, such as motor trucks, airplanes, container cars, skid platforms, lift trucks, and platform slings, have been important factors in reducing the transportation hazards and thereby expanding the use of light-weight fiber containers.

Possible Expansion in Use of Fiber Containers

At the present time the use of fiber boxes is in general limited by the rail carriers to shipping commodities that do not exceed 90 pounds in weight and where the length, width, and depth of the box added together does not exceed 70 inches. These limitations are placed on the use of the fiber box because it is thought that boxes made from the material available will not carry the larger

and heavier loads safely. The fiber box is also confined largely to domestic shipments because of its inability to withstand damp storage conditions and the more severe handling incident to export shipment.

Comparatively little fundamental research has been done to develop the fiber box or the materials used for these boxes. It is reasonable to believe that more intensive research will be carried on in the future to improve the design and construction of these boxes and also to improve the materials used in them. With these improvements it is reasonable to expect a further expansion in the use of fiber boxes through an increase in the weight and size limit permitted by rail carriers and through a more general use of these boxes for export shipments.

There is also the possibility of developing a new fibrous material as a substitute for the thin lumber now used in the present types of wooden boxes.

In brief, all the facts and tendencies strongly indicate a continued expansion in the use of fibrous materials for shipping containers. With the present freight rate structure and merchandising methods, it is doubtful if the quantity of lumber required for the present types and sizes of shipping containers will be expanded appreciably above 1928 requirements. It appears more likely that the quantity of lumber required for these containers will fall off as lighter weight containers are developed.

Competition From Material Other Than Wood and Fiber

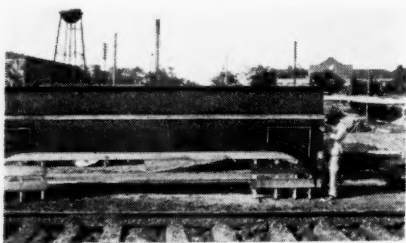
It appears that wood and fiber will continue as the dominant material for shipping containers unless some new material is developed. Metal has replaced wood to a slight extent for some types of containers, such as barrels, drums, and tubs, but it does not appear likely that metal can compete with either wood or fiber for boxes, except possibly where the containers are to be used several times. While Mr. Plaskett makes no reference to the light-weight metals now being produced, the question of cost will be the governing factor in the development of containers of this material in competition with wood, fibre and the heavier metals.

Constructing Underpass in Dallas

Work is proceeding at Dallas, Texas, on an underpass for the extension of Corinth Street through to Lamar Street. The job is being handled by T. H. Johnson, Dallas contractor, and involves about 60,000 cubic yards of dirt and rock excavation and the placing of approximately 10,000 cubic yards of concrete.

The underpass will support 28 railroad tracks, as well as driveways for motor vehicles. All work is being done without interruption to rail traffic, necessitating the building of temporary supports for the tracks before pouring concrete in the footings, pillars and walls. Total length of the project is about 1100 feet.

Contractor's outfit includes a 42-ton capacity Heltzel batching plant and two Jaeger truck mixers. The truck mixers are 1½-yard capacity, and with the weighing and batching system make possible the pouring of about 35 cubic yards



Preparing Forms for Underpass

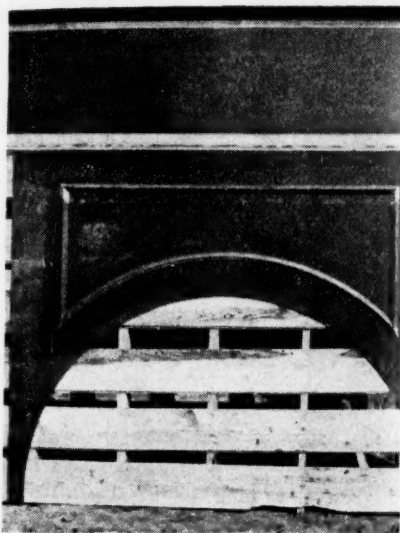
Modern machinery and efficient construction methods speeded operations on the important underpass at Dallas.

of concrete an hour. Batching plant is equipped with a Barber-Greene conveyor to handle bulk cement direct from railroad car or cement storage house.



Modern Equipment Speeds Construction

T. H. Johnson, contractor of Dallas, is using up-to-date equipment and methods in building this important underpass without interrupting rail traffic



Wood Forms Lined With Masonite

To provide for a dense concrete with a smooth surface, the forms were lined with ¼-inch Masonite and 18 pounds of Pumicite admixture was used to the yard of concrete.

Weighing hopper is of the three-compartment type, materials being weighed, then batched to the truck mixer, Kron automatic springless scales being used. A second Barber-Greene conveyor is used on the project to place wet concrete in slabs, columns and footings. With this unit, the truck mixers discharge direct into the hopper end of the conveyor.

In excavation work a P & H shovel and a Northwest dragline were used, a Byers crane being used for unloading material.

Ordinary wood forms, lined with ¼-



inch Masonite, are used. Pumicite admixture is placed in the concrete, 18 pounds being used per cubic yard.

Gifford-Hill & Co., Inc., Dallas, are handling the excavating, Macatee, Inc., Dallas, the waterproofing, and the Brown Electric Shop of Dallas is handling the electric wiring and furnishing lamp posts and fixtures. Cement is being supplied by the Lone Star Cement Company from its Dallas plant. All aggregate is furnished by Gifford-Hill & Co., Inc. About 900 tons of reinforcing steel was purchased from the Sheffield Steel Corporation, Kansas City, Mo. The admixture was supplied by the Pumicite Company, St. Louis, Mo. Masonite was purchased from the Maple Lawn Lumber Company, Dallas, and lumber from the Clem Lumber Company and the Southwest Lumber Company, both of Dallas. All drainage pipe was furnished by the Penniman Concrete Pipe Co., Dallas.

The Browning-Ferris Machinery Co. of Dallas furnished the Heltzel batching plant, Jaeger truck mixers and the Barber-Greene conveyors to the contractor.

\$649,000 BID ON FLORIDA PROJECT

Government Plans 65,000 Feet Levee and Navigation Channel Around South and East Shores Lake Okeechobee

Okeechobee, Fla.—Low bid on a Federal project for the construction of 65,000 lineal feet of levee and navigation channel around the south and east shores of Lake Okeechobee, was submitted to the U. S. Engineer Office, Jacksonville. Maj. B. C. Dunn, U. S. Engineer, by the Canal Dredging Company, Memphis, Tenn., at \$649,432. Work contemplated under the contract is a part of the Federal flood control and navigation project in the Lake Okeechobee section of the Florida Everglades.

Levee construction will involve the use of 4,860,000 cubic yards of materials and will require putting in place 55,000 cubic yards of riprap. The Canal Dredging Company bid called for 11 62-100 cents a cubic yard for excavating channel and \$1.54 a cubic yard for riprap work.

To Build Steel Barges

Nashville, Tenn.—For service on inland waterways between Cairo, Ill., and New Orleans, La., on the Mississippi River, five steel barges have been ordered from the Nashville Bridge Company of this city. Each barge will require 1000 tons of steel, it is said, the total constituting the largest single order the company has received since 1927.

Tulsa's Municipal Airport

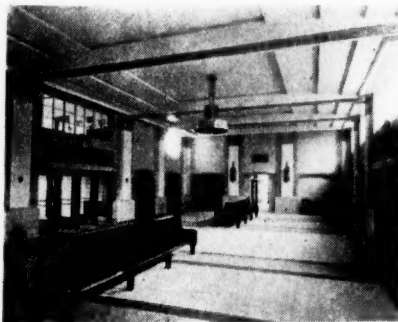


Administration Building of Municipal Airport, Tulsa, Okla.

Recently dedicated at the Municipal Airport in Tulsa, Okla., the new administration building is a steel and stucco structure finished on the outside in cream color and trimmed with vari-colored tile in modernistic effect. Rounded corners and spaces between windows give it an appearance of massiveness, while perpendicular ribs of terra cotta accentuate the height of the central tower which contains administrative of-

office of the field service department and a stairway leading to the administrative offices of the airport on the floor above. On the top floor are offices of the U. S. Weather Bureau. A radio station of United Air Lines is located in the building. Smith & Senter, Tulsa and Kansas City, Mo., were architects for the structure, and G. J. Bowle, Tulsa, was general contractor.

Tulsa Airport became a municipal project February 4, 1930, when \$650,000 was voted as one item in a \$6,230,000 bond issue to purchase the airport from a group of business men who underwrote its original purchase.



A Waiting Room

fices and a central control system for electrical equipment. It is one of the most attractive structures of its kind.

The main entrance leads into a central waiting room finished in two-tone modernistic effect with unusual chandeliers and wall lights. A pilots' lounge is located in the northeast corner and across a hall leading to the east entrance are offices of the Department of Commerce, Aeronautics Branch. On the south side of the main lobby are entrances to a ladies' lounge, telephone booths and men's room; on the north side are ticket offices of the United Airlines, Bowen Lines, Braniff Lines, and the Transcontinental and Western Air System. In the center on the north side is the entrance to the aviation field, and west of the entrance is the

is painted white for ready identification by the public.

The added equipment was made necessary by increased traffic work incident to the addition of approximately 40,000 miles of county roads to the State Highway System, as well as more vigorously to enforce traffic regulations and to prevent gasoline bootlegging and other forms of road tax evasion.

Purchase of the equipment was arranged by the State Division of Purchasing and Printing. The automobiles are the product of the Chevrolet Motor Co., Detroit, and the motorcycles the product of the Harley-Davidson Motor Co., Milwaukee, Wis.

WHARF WORK COMPLETED

Lake Charles, La.—Dock Board forces have completed new dock unit No. 3 (north half) and dock warehouse No. 4, as part of Lake Charles \$5,000,000 harbor and deep-water project, bringing the area of covered floor space of the harbor district to 7½ acres. This work completes the dock work under the P. Olivier & Son contract, which the dock board took over when litigation developed between the board and contractor. Water hydrants are now being installed down the center length of the shed and along the wharf side of the unit. Craft-Rushworth, Ltd., Lake Charles, are handling the work. Contract will soon be awarded for electrical work.

The north half of unit No. 3, on which warehouse No. 4 stands, is 704 by 201 feet, with a 31-foot apron in front of the shed and a 10-foot apron in the rear. The shed is 20 feet high, of structural steel frame, with corrugated siding and end walls. When the south half of unit No. 3 and shed No. 5 are completed, the harbor and terminal district will have a total of 10 acres of warehouse floor space. Facilities of the Lake Charles Compress & Warehouse Company will increase this area to 16 acres.

New Equipment for Virginia Traffic Patrol

Fleets of automobiles and motorcycles recently acquired by the Division of Motor Vehicles, Richmond, Va., are to be used for replacement and for equipping 25 additional men for the division's patrol force under supervision of T. McCall Frazier, director. All the new equipment



Fleet of Motor Cars to Be Used by Division of Motor Vehicles, Richmond, Va.

Supreme Court Building in Washington

The site selected in Washington for the new United States Supreme Court building, for which Congress appropriated \$9,740,000, is the square east of the Capitol, between First and Second streets, East Capitol street and Maryland avenue, north of the Library of Congress and facing the United States Senate Chamber. Of classic design and in harmony with the architecture of the Capitol and adjacent buildings, the new structure will be 385 feet east to west, and 305 feet north to south, with four open courtyards 64 feet square. The portico will be of the Corinthian order, and there will be a low pilaster treatment around the structure.

The central section will be four stories above the terrace on the east front and three stories high on the west front. East stories are to be lower in height between floors and ceilings so that roof line will be continuous. In addition to court room, Justices' rooms, offices and library, there will be conference rooms, rooms for lawyers and rooms for general use.

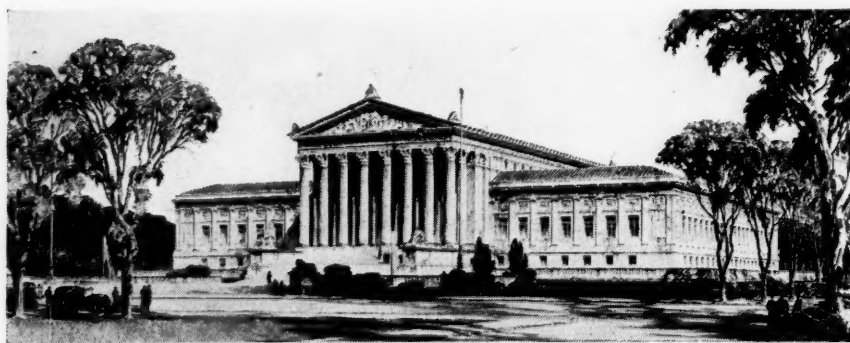
In the central section will be the Supreme Court Room, classical in design, 82 by 91 feet in extreme dimensions and about 64 feet square inside the columns, with a height, floor to ceiling, of 45 feet. Floor area will be about 60 per cent greater than the present Supreme Courtroom. It will be lighted by windows on both sides, opening between colonnades to court yards, as well as by artificial lights. Entrance is through a main corridor.

The second floor will have law library,

rooms for members of the bar and conference rooms. The third floor will contain law library and reading room. Justices' rooms will be on the first floor convenient to the Court Room. A number of rooms for use of lawyers will be provided in the second story. Main floor will offer space for two large conference rooms, rooms for the Attorney General, the Solicitor General, Clerk of the Supreme Court and Marshal. Convenient rooms and special telephone booths have been provided for the press.

The project is in charge of the Supreme Court Building Commission, of which Chief Justice Charles Evans Hughes is chairman. David Lynn, Architect of the Capitol and a member of the Commission, is executive officer in charge of its operation. The building was designed by Cass Gilbert, New York, and is being constructed under supervision of Cass Gilbert, Cass Gilbert, Jr., and John S. Rockhart, architects, New York. General construction contract is being handled by George A. Fuller Company, Washington. As of April 19, the following subcontracts had been awarded:

Inspection—James Berrall, Washington
Waterproofing—R. I. W. Waterproofing Corporation, New York
Reinforcing concrete—R. E. Carrick & Company, Inc., New York
Bluestone paving—The Taylor Stone Company, McDermott, Ohio
Plastering—A. W. Lee, Washington
Exterior marble—Georgia Marble Company, Nelson, Ga., and New York, and Vermont Marble Company, Proctor, Vt.
Stone setting—D. A. Daly, Inc., Philadelphia, Pa.
Millwork—Matthews Bros. Manufacturing Co., Milwaukee, Wis.



United States Supreme Court Building Under Construction

Roofing and Sheet Metal—J. Edw. Linek Sheet Metal Works, Philadelphia
Terra cotta roof tile—Atlantic Terra Cotta Company, New York
Hollow metal work—Niedringhaus, Inc., St. Louis, Mo.
Glass and glazing—M. Krakovitz & Sons Co., Philadelphia
Painting—W. P. Nelson Company, New York
Miscellaneous and ornamental iron—Wheeling Structural Steel Company, Wheeling, W. Va.
Structural steel—Baltimore office of McClintic-Marshall Corporation, Bethlehem, Pa.
Steel erection—Karl Koch Erecting Company, Inc., New York
Plumbing and heating—Riggs, Distler & Company, Baltimore, Md.
Electrical work—Howard P. Foley Company, Washington
Elevators—Otis Elevator Company, Washington
Air conditioning—Carrier Engineering Corporation, Newark, N. J., and New York
Bronze work—General Bronze Corporation, Long Island City, N. Y.
Vault doors—New York office of Herring-Hall-Marvin Safe Company, Hamilton, Ohio
Interior marble—Gray Knox Marble Company, Knoxville, Tenn.
White glass—Pittsburgh Plate Glass Company, Carara Department, New York
Rubber tile—Goodyear Tire and Rubber Company, Akron, Ohio
Timber arches—R. Cuastavino Company, New York
Tile floors—National Mosaic Company, Washington
Cork insulation—John R. Livezey, Baltimore
Rolling steel doors—Washington office of Kinneair Manufacturing Company, Columbus, Ohio.

DIVERSIFIED OPERATIONS ENGAGE GEORGIA PLANT

Macon, Ga.—A diversity of jobs is under way by the J. S. Schofield's Sons Company in the shops here and at widely scattered points in the South and East. At Cresson, Pa., a 60,000-gallon tank is being erected for the Viking Automatic Sprinkler Co. The company also has a contract for a steel barge, 20 by 60 feet, for the United States Engineer Office at Jacksonville, Fla. Boilers for the heating plant of the new post office at Atlanta, Ga., are also being made. An assortment of tanks, boilers, smoke breechings, etc. is also being turned out for the U. S. Veterans Hospital at St. Petersburg, Fla. Another project is a filter tank at Manchester, Ga. Nine buoys completed for the Lighthouse Service at Staten Island, N. Y., are ready for shipment. In connection with water works extensions at Tarboro, N. C., the local firm is furnishing 500 meter boxes.

On a joint bid of \$103,900, the Christy-Dolph & Collins Construction Company of Beaumont, Tex., and Spence & Howe, Port Arthur, Tex., were awarded contract to build an Intracoastal Canal bridge about a mile south of West Port Arthur, plans for which were prepared by Craig P. Hazlett, chief engineer of Scherzer Rolling Lift Bridge Company, Chicago.

Century-Old Underground Railway Tracks

Railroad tracks laid in 1840, and subsequently buried, have just been brought to light in the Pennsylvania anthracite region. The tracks—the remains of one of the oldest underground railroad systems in the United States—were found in the Thomaston section of Pine Knot Colliery, part of the properties of the Philadelphia & Reading Coal & Iron Company. The 44-inch gauge track was made up of puddled iron shoe rails, half an inch thick and two inches wide, mounted on heavy, squared hand-hewn timbers, which in turn were set on cross-ties. Two types of nails were used: Small nails to fasten the iron shoe to



Displaying the Puddled Iron Rails

the wooden rail, and large spikes to fasten the wooden track to the cross-ties. The puddled iron shoe rails of the old track were reported in almost perfect condition.

Sections of these rails analyzed at the laboratories of the Reading Iron Company indicate that the puddled iron of which they are made is closely similar to the puddled iron being made today at the company's plants in the Schuylkill Valley. In commenting on the discovery, the Reading Iron Company, which was established in 1836, announces that the puddled iron was probably made at Pottsville, Pa., the first iron T-rail having been rolled at its Pottsville plant. The company still obtains its iron ore from the Richard Mine, near Wharton, N. J., which was in operation long before the American Revolution.

Lexington, N. C.—The Annola flying field about four miles from this city will soon be opened according to Charles Lohr, Asheboro aviator, who will be in charge of the field and will conduct a flying school.

PLAN FLORIDA CANAL

\$175,000,000 Waterway Across State Would

Effect \$20,000,000 Saving, Says

General Summerall

Jacksonville, Fla.—A movement has been inaugurated by the Gulf-Atlantic Ship and Canal Association to secure \$175,000,000 in Federal funds for the construction of a ship canal across Florida. At a meeting here the Association decided to send a delegation, headed by its president, General Charles P. Summerall, to Washington in an effort to obtain funds from the Reconstruction Finance Corporation to finance the project. Pointing out that construction of the canal would mean employment for hundreds of men, General Summerall states: "It was learned by an economic survey that ships would save \$20,000,000 by avoiding the long trip around the Florida Capes. There is no reason why a portion of this saving should not be used to assist in defraying the canal's construction and maintenance costs."

DISMAL SWAMP CANAL DREDGING

Norfolk, Va.—The U. S. Engineer Office, Norfolk, has low bid from the Trimount Dredging Company, Boston, Mass., for dredging 1,120,000 cubic yards of material in the Dismal Swamp Canal, on an inland waterway from Norfolk to Beaufort Inlet, North Carolina. The work, to be located between Deep Creep, Virginia, and South Mills, North Carolina, will cover a distance of 22.08 miles and involve a channel 9 feet deep below mean water level of the canal. Bottom width will be 50 feet. The bid of the Trimount Company was \$106,176.

Birmingham, Ala.—Store delivery of freight shipped in less than car lots will be inaugurated by the Louisville & Nashville, and the Nashville, Chattanooga & St. Louis railroads as soon as details may be worked out.

Byers Crane on a Difficult Job



In the construction of the west approaches to the United States Capitol building, Washington, a Byers 1-yard crane, with a 60-foot boom, was utilized in handling and setting Mt. Airy granite pavement stones ranging in weight from 300 to 3600 pounds each. An interesting feature of this job is that the machine had to operate up a ramp 80 feet long and 20 feet high, the ramp being composed of blocked-up timbers.

In setting the stone, the machine was required to "boom" up and down continuously to pick up stone at a radius of 50 feet, and set it carefully and accurately without chipping.

The total cost for this construction was \$130,000. It was handled by the Geo. A. Fuller Co. of New York and Washington, under the supervision of David Lynn, Architect of the Capitol.

IRON, STEEL AND METAL MARKET

Optimism Spreads

Birmingham, July 25—[Special.]—Visions of activity in industrial lines are seen as the new relief bill and the Reconstruction Finance Corporation operations take on movement and leaders in the Birmingham express optimism that this district will be among the first to feel the benefits. There is reiteration that an immense amount of cast iron pressure pipe will be required when municipalities and other interests throughout the country can market their bonds and this will be possible under the Federal financing plans. In other directions the vision spreads and there is optimism that within 60 days a decided turn for the better will warrant increased production.

Steel mill operations the past week were 21 per cent of capacity. The Gulf States Steel Company has continued two of its open hearth furnaces on steel ingots and at the same time has had its wire nail, sheet and other mills going. The Tennessee Coal, Iron & Railroad Company has been operating four open hearth furnaces, the sheet and other mills at its Fairfield works.

The pig iron market has been running slack for many months. Four blast furnaces have been making iron. The pipe industry is operating around 30 per cent capacity and buying iron only as needs present themselves. The one firmness has been in the quotations. For more than a year and a half the price has been \$10, No. 2 foundry, for the iron that is being shipped to competitive sections and \$11 for the home melters.

Coal producers are confident that their trade will come back, use of modern stokers and crushed coal burning machines having demonstrated that coal is the cheapest fuel after all.

Coke production continues around 30 per cent capacity. This can be increased materially on short notice. A few more than 500 ovens out of 1390 are in operation at present in this district. A number of those now idle are being placed in the discard.

The scrap iron and steel market is listless and prices are low. In many instances, melters of old material have been offering their own price for their requirements and have obtained what they wanted. Heavy melting steel is as low now as it has been in years, the quotations being given as low as \$6 per ton, half of the prevailing price ten years ago.

Concrete Steel Company is clearing

the site of their old plant, recently burned, and will shortly have out plans for a new plant.

Improvement Noted

Pittsburgh, July 25—[Special.]—Apparently the steel industry has at last rounded a turn and is in line for improvement, probably very gradual in the next few weeks but more marked by the middle of September. At the same time there have been no markedly favorable developments as to the actual course of trade. Mill operations have scarcely more than sustained last week's rate, when there was recovery from the mid-year and holiday dip, to a rate fully equal to the rate in the last two weeks of June. Steel ingot production has been at 15 to 16 per cent of the large capacity now in existence.

In general trade sentiment, there has been a further improvement, with more men going on record that the lowest point in steel activity has been passed and predicting substantial improvement by September. These predictions are based partly on the internal showing of the trade and partly on appraisals of the general financial and business situation and outlook.

Fabricated structural steel awards reported in the last three weeks have run successively 6,000, 10,000 and 12,000 tons, making three rather light weeks following two months in which awards were at a much higher rate than in the first four months of the year. The business is almost entirely in public buildings and bridges.

Three of the smaller plants in the Pittsburgh district resumed steel production last week after periods of idleness ranging from a few weeks to several months while a larger plant is to resume about the middle of this week. The plants among them make a wide variety of products. The particularly light demand of the last couple months has come more than usual from miscellaneous small users of steel. Steel for household and personal use has done better than other steel. The refrigerator makers have had a fairly good season and are still running at a moderate rate although the regular active period is ended. Stove and range makers have been increasing their steel orders, being promised quite a fair run for the autumn trade.

Finished steel prices are holding at least as well as formerly and it appears that some special concessions have been withdrawn or reduced.

Non-ferrous Metals Down

New York, July 25—[Special.]—Declining prices have again been the general rule among the non-ferrous metals, though these have not been as severe as during some recent weeks. Lead has fallen to a new all-time low of 2.65c per pound, New York. Copper has sold in Europe at 4.50c per pound, also a new bottom for all time. The zinc market is weak, with prime western slab zinc selling around 2.50c per pound, East St. Louis, the extremes for 1932 having been 2.30 and 2.90c per pound. Zinc ore has been declining rather sharply, with sales made at \$14 to \$16 per ton, depending on quantity, as against \$20 at the recent high.

Silver and tin are the only strong major metals from a market standpoint. Tin has been selling quite steadily at around 21c per pound while silver goes at a little less than 27c per ounce. The quicksilver market is weak, selling around \$53 per flask of 76 pounds, the lowest quotation for several years.

Despite the unwholesome complexion of the non-ferrous metal markets, sentiment in industry which is concerned largely with steel and metals is more cheerful. The relief bill is expected to provide for much building and engineering construction, employing considerable quantities of metals.

Copper Exporters, Inc., had made no sales for several days until Wednesday when they lowered their price to 4.70c per pound, European ports, at which figure they sold a little in competition with the Japanese producers whose quotation was 4.50c. The domestic price of copper has been unchanged at 5½c per pound, with virtually no sales made. This quotation has an easy tone and might be shaded down to 5 cents on a firm bid.

The 4-cent duty on copper has by now been in effect for a month, the result to date being that the American price is three-quarters of a cent per pound above world levels, whereas in former times the European market was a shade higher. The differential has resulted of course through the lowering of world levels rather than the advancing of the American price.

Despite the fact that lead is the cheapest on record consumers have not been interested, expecting still further reductions.

Tin has kept steady in price because of the announcement of the formation of another pool to remove surplus stocks from the market.

NEW AND IMPROVED EQUIPMENT

Portable Cooling Unit

G. H. Jackson of the Modine Mfg. Co., Racine, Wis., is visiting by the air route city after city in the South and Southwest, to tell ice companies of the merits of a new portable room-cooling unit that blows a cool and refreshing breeze when charged with ice. Mr. Jack-

employs a revolutionary principle of combustion which the engineers have named progressive impact atomization. By this means it is said every available heat unit is taken out of the fuel oil, so that nothing goes to waste. In experiment tests, electric power for operating the new type furnaces ranged from \$1.50 to \$2 per month.

is a water-cooled, complete combustion unit, forcing hot gases to the furnace or boiler. The W. J. Savage Company, Knoxville, are manufacturers.

\$10,908,000 CONTRACT LET FOR WELDED STEEL PIPE

The Bureau of Reclamation, Department of the Interior, has awarded contract to The Babcock & Wilcox Company, New York, at \$10,908,000 for fabrication and installation of welded steel outlet pipes for the hydraulic power and flood control tunnels at Hoover Dam. The big Government project on the Colorado River involves the construction of the world's highest dam, estimated to require 5,500,000 barrels of cement and 60,000 tons of steel. The Babcock & Wilcox contract involves such unusual features as the fabrication of the largest diameter pipes ever constructed, and the construction of a plant, built solely for the purpose.

All sections of pipe will undergo various tests, one of which will be X-ray examinations of welded seams.

Fulton-Savage Coal Stoker

A new automatic coal stoker developed by Weston M. Fulton, Knoxville, Tenn., and manufactured under the trade name of the Fulton-Savage Stoker, is featured by its simplicity of operation. Designed and built to use coal, the Fulton-Savage Stoker is said to incorporate a new principle which makes for low cost, durability and efficiency. The principle of hydraulic feed for the coal is employed, with full automatic control to give uniform thickness in feed and combustion. The stoker may be installed on any furnace or boiler up to 50-horsepower capacity; is a gas producing unit of the cross draft type, while the stoker proper



Demonstrating Portable Cooler

son flies a Waco plane, the device occupying the passenger compartment.

It is declared that the Modine Ice-Fan opens a practically unlimited new field for ice companies. It is in reality an ice storage cabinet fitted with an electric blower. Hot, humid air from the room is drawn into the ice charged cooler and is delivered cool and freshened to the room through a grille at the top of the device, an air deflector controlling the direction of the air stream. Under hot weather conditions the two-section ice-fan will melt about 20 pounds of ice an hour, lowering the temperature of the delivered air 25 degrees, say the producers.

General Electric Oil Burning Unit

Engineers of the General Electric Company, Schenectady, N. Y., have developed a new oil-burning home heating unit, offering the convenience of automatic oil heating, it is declared, and at the same time is not expensive to install and operate. From tests made during an 8-month heating season with experimental installations, actual savings are said to have ranged from 14 to 53 per cent, the furnace maintaining uniform temperatures and providing a hot water supply. The new oil-burning furnace

Railroad Freight Cars Built of Aluminum



Hopper cars constructed of aluminum sheets and aluminum structural shapes are light in weight and amply strong to carry heavy payloads without increasing the gross load, asserts the Aluminum Company of America, Pittsburgh. This company last year at Alcoa, Tenn., erected the first aluminum plate mill of its kind. At this mill, which has a capacity of 1,000,000 pounds monthly, aluminum ingots are rolled into plates suitable for street cars, tank cars, railroad coaches and other large scale applications, for it is capable of producing heavy plates up to 75 feet in length and 120 inches wide. Aluminum structural shapes are rolled at the company's plant at Massena, N. Y.

CONSTRUCTION DEPARTMENT

and

NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$10.00 a year.

Airports, Airplane Plants, Etc.

Ala., Maxwell Field—Capitol Construction Co., 62 Bartow St., N. W., Atlanta, Ga., bidding on electric system, Maxwell Field, for constructing Q. M.; work includes distribution system and street lighting; transformers, vaults; gate house and switching station; bids opened Aug. 2. 7-14

Florida—State construct airport between West Palm Beach and Lake Okeechobee; A. H. Heermance, City Aviation Director, Miami.

Fla., Opa Locka—Ebsary Foundation Co., 1050 Biscayne Blvd., Miami, general contractor for constructing steel mooring mast, roads, shelter, tanks, pumps, etc., at U. S. Naval Reserve Base, for U. S. Bureau of Yards and Docks, sublet contract to Everglades Construction Co., 812 N. W. 12th Ct., Miami, for all foundations and road work; other items to be handled by general contractor. 7-7

Okl., Oklahoma City—City receiving bids for constructing gasoline storage tanks at new air terminal.

W. Va., Huntington—West Virginia Airways, Inc., C. W. Barr, Monongahela Air Transport Co., Fairmont, operate air line between Huntington and Pittsburgh.

Bridges, Culverts and Viaducts

Proposed Construction

Fla., Miami—City, C. W. Tomlinson, Clerk, opens bids Aug. 2 for removal and reconstruction of Star Island Bridge.

Mo., New Madrid—U. S. Engineer Office, Memphis, Tenn., let contract at \$9966 to E. O. Korsmo Construction Co., Porter Bldg., Memphis, for conc. box culvert, St. Johns Bayou Levee, near New Madrid.

N. C., Beaufort—Cape Lookout Highway, Inc., granted extension until July 24, 1935, for completion of bridge across North River and Black Sound, near Lenoxville.

OKLAHOMA—See Roads, Streets and Paving.

TENNESSEE—Dept. of Highways and Public Works, R. H. Baker, Commr., Nashville, plans bridge over Forked Deer River, at Haywood-Crockett county line.

TENNESSEE—Dept. of Highways and Public Works, Nashville, granted permission under bill signed by president to construct bridge over south fork of Forked Deer River, on Milan-Brownsville Road, Hwy. 76, Haywood-Crockett county line.

TEXAS—State Highway Comsn., Gibb Gilchrist, Engr., Austin, opens bids Aug. 3 for 8 bridges in Presidio, Hamilton, McLennan, Dallam, Jeff Davis, Wood, Val Verde and Fayette counties.

WEST VIRGINIA—State Road Comsn., Charleston, has low bids for projects in following counties:

Cabell—Minnora Bridge, J. M. Francesca Co., Fayetteville, \$10,155;

Calhoun—Ona Bridge, A. B. Peraldo & Son, Jaeger, \$12,012; Crummis Creek Bridge, Clark and Lewis, Luray, Va., \$14,835;

Morgan—Paw Paw overhead bridge superstructures, Clark and Lewis, \$4307; substructure, E. R. Mills, Charleston, \$9339. 7-14

W. Va., Drybranch—Kanawha County Court, R. N. Moulton, Clerk, Charleston, opens bids Aug. 1 for Proj. 238-D; substructure and superstructure of Bridge 130, over Cabin Branch at Drybranch; 2 conc. abutments, one 100-ft. pony truss span, conc. floor.

Contracts Awarded

Missouri—Mississippi Valley Structural Steel Co., Decatur, Ill., has contract for 310 tons of steel for bridge in Jasper County; Pittsburgh-Des Moines Steel Co., Neville Island, Pittsburgh, Pa., for 176 tons steel for bridge, Odaway County.

Mo., Plattsburg—Clinton Bridge Co., Clinton, Iowa, furnish 145 tons steel for highway bridge.

Oklahoma—Ben Sibbitt Iron & Foundry Co., Wichita, Kansas, furnishing 200 tons steel for highway bridge, Woodward County.

Okl., Oiltown—Petroleum Iron Works, Beaumont, Tex., furnishing 352 tons steel for highway bridge; L. H. Lacy Co., Gen. Contr., Burt Bldg., Dallas.

TEXAS—Virginia Bridge & Iron Co., Madison Ave., N. E., Roanoke, Va., has contract for 350 tons steel for highway bridge; Houston Structural Steel Co., 3910 Washington St., Houston; for 450 tons; Mosher Steel & Machinery Co., 5209 Maple St., Dallas, for 560 tons.

TEXAS—State Highway Dept., G. G. Wickline, Bridge Engr., Austin, let contract to Austin Bridge Co., Dallas, for Sabine River bridge on Hwy. 43, between Harrison and Panola counties. 6-23

Tex., Port Arthur—Christy-Dolph-Collins Construction Co., Beaumont, and Spence-Howe Construction Co., Port Arthur, Gen. Contrs. for bridge being constructed by Jefferson County over Intracoastal Canal at Texas State Hwy. 87, near Port Arthur, let following subcontracts: Bridge and machinery, Petroleum Iron Works Co., Beaumont; rein. steel, Jefferson Steel Co., Beaumont; Scherzer folding lift bascule type structure with rein. conc. approaches on conc. pile bents, 120-ft. clear span, 720-ft. approaches, conc. roadway; quantities include 1100 cu. yd. plain conc., 1300 cu. yd. rein. conc., 3100 cu. yd. earth excav., 270,000 lb. rein. steel, 320,000 lb. struc. steel, 1500 cu. yd. filling, 8800 sq. ft. steel sheet piling, 7680 lin. ft. untreated wood piling, 4000 lin. ft. creosoted piling, 5320 lin. ft. conc. piling, 4.5 M ft. b. m. creosoted timber; Craig P. Hazelet, Scherzer Folding Bridge Co., 53 W. Jackson Blvd., Chicago, Ill., designing engineer. 7-21

Canning and Packing Plants

Fla., Lakeland—Florida Canned Specialties, Inc., capital \$20,000, incorporated; F. M. Traynor, C. D. Brorlin.

Coal Mines and Coke Ovens

Ky., Beauty—Hysteam Coal Corp., capital \$10,000; J. H. Mandy, Dan Knoutz.

Cotton Compresses and Gins

Ark., Parkdale—Parkdale Gin Co., capital \$11,000, incorporated; J. B. Sanders, Parkdale; Keith Sanders, Warren.

Ga., Valdosta—International Vegetable Oil Co., Inc., reported, negotiating for property of Farmers Ginning Co., C. E. Baker, Pres., including buildings and equipment.

Mo., Caruthersville—Anderson, Clayton & Co., 66 S. Front St., Memphis, Tenn., advises Nelson and Woodson, Russellville, Ark., have contract for warehouse; wood; containing 40,000 sq. ft.; work begun; completion Sept. 1. 7-21

Tex., Houston—Universal Cartage Co., capital \$25,000, incorporated; R. W. Franklin, Cotton Exchange Bldg.

Tex., Memphis—Wm. Gerlach rebuild burned Gerlach Gin; repair equipment.

Tex., Oakwood—Redding Gin Co., capital \$15,000, incorporated; F. M. Redding, O. L. Gregg.

Drainage, Dredging and Irrigation

Alabama—Jahneke Service, 814 Howard Ave., New Orleans, La., has contract at \$233,000 for dredging 5,336,000 cu. yds. of material in Pensacola Bay-Mobile Bay and intracoastal waterway. 7-7

Florida—U. S. Engineer Office, Major B. C. Dunn, District Engr., 4 E. Bay St., Jacksonville, Fla., may soon ask bids on dredging Intracoastal Waterway between New River Inlet and Miami, in Broward and Dade counties.

Virginia—North Carolina—War Dept., U. S. Engineer Office, Norfolk, received low bid at \$106,176 from Trimount Dredging Co., 10 State St., Boston, Mass., for dredging 1,120,000 cu. yds. material in Dismal Swamp Canal, Inland Waterway from Norfolk, Va., to Beaufort Inlet, N. C., between south gate at Deep Creek, Va., and north gate at South Mills, N. C.; distance of about 22.08 miles to depth of 9 feet below mean water level of canal and bottom width of 50 ft.; entire canal is 116,585 ft. long. 6-23

Va., Petersburg—War Dept., U. S. Engr. Office, foot of Front St., Norfolk, Frank D. Beckham, Chief, Administrative Div., advises bids opened July 20 for dredging in Appomattox River, were rejected.

Electric Light and Power

D. C., Washington—Stone & Webster Engineering Corp., 49 Federal St., Boston, Mass.,

closed contract with Potomac Electric Power Co., 10th and E Sts., N. W., to furnish, when called upon, consulting and engineering service; under this contract work is now in progress on design and construction of steam power station at Buzzard's Point, junction of Anacostia and Potomac River; initial installation will be 35,000 kw., and station will be designed for expansion; design of equipment will be such as to prevent smoke nuisance; Potomac Co. will spend approximately \$4,000,000; will deliver power by Oct. 1, 1933. 7-21

D. C., Washington—Potomac Electric Power Co., 10th and E Sts., N. W., completed negotiations for bringing hydro-electric power from Safe Harbor Water Power Co.'s plant on Susquehanna River at Safe Harbor, Pa., to supplement electric power generated by steam in Potomac Co.'s plants here; interconnection will be made between Potomac system and high tension transmission lines of Safe Harbor-Baltimore system; a 23-mile transmission line will be built from a point just west of Ellicott City, Md., nearest point to Washington, on a 230,000-volt line, bringing Safe Harbor power to Maryland; construction also includes switching station in Howard County, Md.; erect 100,000 h. p. transformer station; lay underground cables, erect towers, etc.; construction to begin in a few months; river power to be delivered to Potomac system by Oct., 1933; through the arrangements successfully negotiated by Potomac Electric Power Co., provision is made for interchange of power between the 325,000 h. p. plants in Washington, of which the latest addition is now under construction, the steam plants in Baltimore and developments at Safe Harbor and Holtwood.

Missouri—Carl G. Stifel, Pres., John H. Bundlach Real Estate Co., 3600 N. Broadway, St. Louis, filed application with Bd. of Supervisors, at Fredericktown, Madison County, and St. Charles County Court, St. Charles, for preliminary permit to construct power dam and industrial district on Mississippi River near Chain of Rocks Bridge; develop 175,000 h. p.; project also includes constructing lock system near Missouri shore of river and an earth embankment to connect with existing system of levees on Illinois shore.

Va., Leesburg—Town Council install white way on King St.

Garages and Filling Stations

Fla., Jacksonville—Gate City Storage Co. incorporated; W. R. Frazier, Bennett Bldg.; A. W. Knight, A. C. Morris.

Fla., Jacksonville—F. V. Oliver Co. incorporated; F. V. Oliver, 900 Hogan St.

Fla., Titusville—George W. Scoble, Jr., owner of building occupied by Hill Motor Co., storage garage, will probably rebuild burned building.

Fla., Miami—Atlantic Refining Co., 7380 N. W. 7th Ave., Miami, received low bid from Halsema Bros., 1452 N. Miami Ave., Miami, for service station 1900 N. W. 7th Ave., Miami; E. A. Ehmann, Archt., 175 E. Flagler St., Miami.

Fla., Miami—Standard Oil Co., Jacksonville, Dist. Offices, 61 N. W. 11th St., Miami, reported, considering erecting master service station Biscayne Blvd. E.

Fla., Miami—Sandquist Construction Co., S. W. 27th Ave., has contract for service station Ponce de Leon Blvd. and Giralda Ave., Coral Gables, for Standard Oil Co. 7-14

Ga., Albany—A. C. Knight, has contract to remodel service station for J. E. LeGreve; conc. found.; brick walls; tar and gravel roof.

Mo., St. Louis—Disco Distributing Co., incorporated; J. E. Weissenborn, 23 Ranier Drive.

S. C., Chester—J. C. Quinton erect filling station, Saluda and Oak Sts.

S. C., Columbia—Standard Parts Co., capital \$20,000, incorporated; Carlyle Fraser, R. L. Turner.

Tex., Dallas—Warren Diamond, 4224 Armstrong Pkwy., and P. L. McClanahan erect \$20,000 garage, 1315 Elm St.; 75x200 ft., 3 stories.

Tex., Highland Park, Dallas—Flippin-Prather Stores erect \$12,500 filling station.

Tex., Sherman—Phillips Petroleum Co. let contract to Max Gibbs, Sons & Co. to erect filling station, N. E. Cor. Walnut and Mulberry Sts.; soon let contract for filling station, Cor. Crockett and Pecan Sts. 7-14

W. Va., Clarksburg—Peck Automobile Co., capital \$25,000, incorporated; J. W. Wilson, Jr., T. M. Baldwin.

Gas and Oil Enterprises

Fla., Pensacola—The Texas Co., care of Jas. W. Calking, Engr. Dept., Mortgage Guarantee Bldg., Atlanta, Ga., plans constructing wharf; cost \$250,000; piling; plain and rein. conc.; preliminary plans in progress.

Md., Baltimore—Consolidated Gas, Electric Light & Power Co., Front & Constitution Sts., receives bids July 30 for brick, 1-story, 39x44 ft. valve house near Cold Spring Lane; Consolidated Engineering Co., 20 E. Franklin St., bidding.

Miss., Biloxi—Southwestern Gas & Electric Co., Shreveport, let contract to L. E. Myers Co., Allen Bldg., Dallas, Tex., for laying 6-in. gas main 5 mi. from present terminal to soldiers' home on west, and tying in 4-in. loop, 2 mi. west of here; 7 mi.; \$30,000. 7-21

Mo., Butler—Oil Well Supply Co., 316 S. E. 29th St., Oklahoma City, Okla., acquired gas system of Western Service Corp., in Bates County; Missouri Gas Co. will take over control of entire system in Bates County.

Texas—Railroad Comsn., Austin, granted permission to Magnolia Petroleum Co., 1009 Fannin St., Houston, to operate carbon black plant in Wheeler County; will use residue casinghead gas from wells in Wheeler County.

Tex., Aransas Pass—Atlantic Oil Producing Co., Magnolia Bldg., Houston, and Atlantic Pipe Line Co., both subsidiaries of Atlantic Refining Co., 260 S. Broad St., Philadelphia, Pa., surveying for line from Government Wells district in Northern Duval county to Aransas Pass; distance of 90 miles.

Tex., Big Spring—Tribal Oil Co. incorporated; G. T. Hall, Otis Chalk.

Tex., Dallas—Rude Oil and Development Co., incorporated; I. Rude, 1200 Elm St.

Tex., Fort Worth—Illinois Pipe Line Co., subsidiary of Ohio Oil Co., H. C. McCracke, V. Pres., W. T. Waggoner Bldg., laying 7 mile 6-in. pipe line.

Tex., Houston—City, J. M. Nagle, City Engr., plans improvements to gas plant Magnolia Park; expend about \$21,500.

Tex., Refugio—Clymore Co., Inc., chartered; Garland Clymore, Gordon Shelton.

Tex., Tyler—Mack Drilling Co., Inc., chartered; W. T. Mack, Paul Tucker.

W. Va., Charleston—L. W. Lott, 63 Wall St., New York, advises Donald B. Adams, Pres., Hillcrest Natural Gas Co., 155 E. 47th St., New York, at sale of Midland Natural Gas Co.'s properties, bid in said properties for Northeastern Natural Gas Co. a corporation formed for, among other purposes, the taking over of certain assets of Midland Natural Gas Co., also bid in properties of former Twin States Natural Gas Co.; Hillcrest Natural Gas Co., was incorporated under laws of State of West Virginia, for, among other purposes, the taking over of certain assets of Twin States Natural Gas Co. and continuing business on reorganized basis. 7-14

Ice and Cold-Storage Plants

Fla., Fort Lauderdale—Broward County Port Commrs., Thomas E. Swanson, Chrmn., considering erecting pre-cooling plant.

Iron and Steel Plants

Ala., Birmingham—Concrete Steel Co., 2 Park Ave., New York, clearing site, rebuild recently burned plant; plans out shortly.

Land Development

Fla., Eustis—Eustis Grove Co., incorporated; D. M. Buie, R. S. Witherington.

Fla., Fort Pierce—D. O. McDougald, Inc., chartered; D. O. McDougald, R. A. Manus.

Fla., Miami—Sawer Corp. incorporated; S. S. Silverman, City Natl. Bank Bldg.

Fla., Miami—Faymours Corp. incorporated; S. H. Palmer, H. Marks, 1164 S. W. 17th Ave.

Fla., Orlando—Mount Plymouth Hotel and Golf Course Co. incorporated; R. F. Maguire, M. W. Wells.

Fla., Orlando—Conway Groves, Inc., chartered; John G. Baker, Robt. L. Hughes.

Fla., St. Petersburg—D. L. Clark, 5435 Dimmoyle, Pittsburgh, Pa., expend \$10,000 improving Snell Isle Golf Course, including garage, dancing pavillion, etc.

Fla., Tampa—Warren Bros. & Henderson, Inc., chartered; W. H. Warren, Tarpan St. Ga., Atlanta—E. E. Bennett Realty Corp., capital \$25,000, incorporated; E. E. Bennett, James A. Miller, 3018 Habersham Rd., N. W.

Ky., Paducah—Exall Orchard and Real Estate Co. increased capital \$20,000 to \$30,000.

Md., Baltimore—Mount Savage Realty Holding Corp., 1504 First Natl. Bank, incorporated; Catherine D. Sheridan Biays, Mt. Savage; Sheridan Biays, 922 15th St., N. W., Washington, D. C.

Mo., Cape Girardeau—City, Mayor E. L. Drum, develop 10 additional acres for cemetery.

Mo., St. Louis—Loud Realty Co., capital \$20,000, incorporated; August B. Loud, Clayton, St. Louis; W. R. Becker.

S. C., Columbia—Wacomaw Realty Co., incorporated; Frank C. Owens, 1319 Laurel.

Tex., Houston—Keith-Nelson Co., capital \$10,000, incorporated; J. N. McFarland, Post-Dispatch Bldg.

Va., Richmond—Rocky Ridge Realty Corp., capital \$10,000, incorporated; J. Roland Locke, Travelers Bldg.

Lumber Enterprises

Fla., Pensacola—East Point Turpentine Co. incorporated; H. A. Lurton, Thos. L. Waters.

Ga., Townsend—T. T. Scott, Kenansville, Fla., dismantled mill at Kenansville and located at Townsend. 5-19

Mining

Md., Baltimore—Falls Road Stone Quarry, Inc., 2701 Falls Rd., chartered; John M. Hammond, Lawrence R. Collins; operate stone quarry.

N. C., Alarka—Alarka Lumber Co., Arthur Brooks, Pres., develop feldspar and cyanite deposits; plans erecting reduction plant to work cyanite.

Va., Buchanan—James River Hydrate & Lime Co., capital \$200,000, incorporated; L. P. Dillon, Indian Rock; develop limestone quarry; build plant 3 miles north of Buchanan.

Miscellaneous Construction

Arkansas-Mississippi—Major Brehon Sovvervel, Dist. Engr., Memphis, Tenn., let following contracts for levee work in Arkansas and Mississippi: Harris & Brandenburg, West Memphis, Ark., at \$26,000, for 150,000 cu. yds. new levee near Barfield and for 110,000 cu. yd. of new and enlarged levee near Barfield; C. G. Kershaw Contracting Co., Martin Bldg., Birmingham, Ala., at \$154,024, for levee wall at Helena, Ark.; at \$90,000, for constructing 362,000 cu. yds. levee enlargement near New Madrid, Mo.; Walter H. Denison & Son, Cushman, Ark., at \$164,712, for constructing 920,000 cu. yds. new levee near Renalala, Miss.; F. S. Neely Co., 669 Maury, Memphis, Tenn., at \$130,000, for new levee near Clark, Miss.

Ark., Helena—U. S. Engineer Office, Memphis, Tenn., receiving bids for 1,050,000 yd. of earth work for constructing 2 additional miles of levee; extend from Fitzhugh plantation on north to a point 2 miles above Westover Landing; cost \$200,000.

Fla., Jacksonville—U. S. Engr. Office, P. O. Box 45, received low bid at \$649,432 from Canal Dredging Co., Memphis, Tenn., for 65,000 ft. of levee and navigation channel around south and east shores of Lake Oke-

chobee; work is part of Federal flood control and navigation project in Lake Okeechobee section of Florida Everglades; total of 4,860,000 cu. yds. material will be used in levee and 55,000 cu. yds. of riprap put in place. 5-23

Fla., Panama City—Texas Oil Co. plans erecting \$25,000 port terminal consisting of docks, warehouses and tanks.

La., Alexandria—J. P. McNulty, Pine Bluff, Ark., has contract at \$100,000 for levee work along Red River; contract involves about 70,000 cu. yd. 7-14

Md., Baltimore—Charles L. Stockhausen, 33 S. Gay St., has contract for building construction work on incinerator Reed Bird Ave.; brick; 2-stories; 115x192 ft. 7-21

Missouri, Arkansas—U. S. Engineer Office, Box 97, Memphis, Tenn. let following contracts for river improvement work, amounting to about \$5,000,000. Contracts are as follows:

110,000 cu. yd. new and enlarged levee near Barfield, Ark., and 2,785,000 cu. yd. new levee near Renalala, Miss., Trinity Farm Construction Co., Sante Fe Bldg., Dallas, Texas, \$551,098.

535,000 cu. yd. new levee near Renalala, Miss., Valley Dredging Co., Donna, Texas, \$90,950.

1,820,000 cu. yd. new levee near Commerce, Miss., E. F. Powers Construction Co., West Palm Beach, Fla., \$280,280.

1,114,000 cu. yd. new and levee enlargement near Farrell, Miss., Globe Construction Co., Louisiana Bldg., New Orleans, La.

525,000 cu. yd. new levee near Renalala, Miss., to Charles W. Greeson, Opelousas, La. 2,430,000 cu. yd. new levee near Renalala, Miss., A. Guthrie & Company, St. Paul, Minn., \$405,810.

600,000 cu. yd. new levee near Renalala, Miss., Stevens Brothers and the Miller Hutchinson Company, New Orleans, La., \$131,100.

570,000 cu. yd. new levee near Renalala, Miss., Henry Hughey Company, Inc., 971 James Bldg., Memphis, Tenn., \$111,150.

1,005,000 cu. yd. new levee near Renalala, Miss., J. T. Pollard, Greenville, Miss.

200,000 cu. yd. levee enlargement near Renalala, Miss., Dave Elkas, Leota, Miss., \$35,400.

858,000 ft., mattress lumber for revetment at Cat Island, Ark., Anderson-Tulley Co., \$12,441.

Reinforcing fabric, wires, clips, etc., for revetment at Cairo, Ill., and Memphis, Copperweld Steel Company, Glassport, Pa., \$614,229.50.

Three 31-foot steel-hull gasoline motorboats for delivery at Memphis, to the St. Louis Structural Steel Company, East St. Louis, Ill., \$10,374.

200,000 lb. 7-16-in. wire strand for revetment at Cairo, Ill., Sheffield Steel Corporation, Sheffield, Kansas City, Mo., \$4,400.

2,500,000 lb. 7-16-in. wire strand for revetment at Cairo, Ill., and Memphis, Broderick & Bascom Rope Company, 4263 N. Union St., St. Louis, Mo., \$62,062.

400,000 bbl. cement for revetment work at Cairo, Ill., Marquette Cement Manufacturing Company, 140 S. Dearborn, Chicago, Ill., \$456,000.

36,000 tons of coal to be delivered between Cairo and Memphis, West Kentucky Coal Company, Paducah, Ky., \$113,400.

Wall at Caruthersville, Mo., Volz Construction Co., Baltimore Bldg., Memphis, Tenn., \$86,213.25.

Several bid openings will take place soon and these and other contracts are in preparation.

Missouri—War Dept., U. S. Engrs. Office, 428 Custom House, St. Louis, W. A. Snow, Major, Corps of Engineers, Dist. Engr., received following low bids for work, opened July 21 and 22: On Mississippi River—2000 ft. pile clump dikes at Brooks Point, Ill., mile 21 to 26, Massman-Peterman Co., 1970 Ry. Exchange Bldg., St. Louis, at \$48,425; 1000 ft. pile clump dikes at Herculaneum, mile 150 to 154, Woods Bros. Construction Co., Lincoln, Neb., at \$36,165; 7500 ft. pile clump dikes, river at Gibboney Island, mile 45 to 55, Union Bridge & Construction Co., Midland Bldg., Kansas City, at \$92,305; 2000 ft. revetment at Liberty Bend, Ill., mile 94

to 96, Kansas City Bridge Co., B. M. A. Bldg., Kansas City, at \$33,150; 2000 ft. revetment at Burnham Island, mile 37 to 40, Woods Bros. Construction Co., at \$34,287; 4500 ft. revetment river at Cape Girardeau, Mo., mile 48 to 52, Badgett Construction Co., Memphis, Tenn., at \$57,785; 1000 ft. pile clump dikes, river at Chosley Island, Mo., mile 156 to 160, W. P. McGeorge, Pine Bluff, Ark., at \$28,950; 1500 ft. revetment, river at Elk Island, mile 6 to 10, Bilhorn, Bower & Peters, Ry. Exch. Bldg., St. Louis, at \$26,180. On Missouri River—1640 ft. standard pile clump dikes at Hormann Reach, mile 100 to 104, Woods Bros. Construction Co., at \$32,770; 3000 ft. standard revetment at St. Albans, mile 53 to 56, Morrison & Mason Construction Co., 201 Exchange Bldg., Kansas City, at \$34,960; 2000 ft. standard pile clump dikes and about 600 ft. of crib dikes at Augusta Bend, mile 58 to 62, Patton-Tully Transportation Co., N. Second St., Memphis, Tenn., at \$51,435; 3000 ft. standard revetment at Lower Pelican Island, mile 8 to 13, Kansas City Bridge Co., at \$38,080; 1800 ft. standard pile clump dikes at Pelican Bend, mile 10 to 16, Patton-Tully Transportation Co., at \$33,510. 7-14

Missouri — U. S. Engineer Office, Postal Telegraph Bldg., Room 707, Kansas City, received following low bids for standard pile dikes in Missouri River: C. W. Hunter Co., 177 S. Front St., Memphis, Tenn., at \$138,041, for 6220 ft. of standard pile clump dikes in Missouri River at Brunswick and Grand River Bends, 5710 squares of mattress (lumber); 8700 cu. yds. of stone and 169,110 ft. piles; Woods Brothers Construction Co., Lincoln, Neb., at \$154,465, for 6880 ft. of standard pile clump dikes in Missouri River at Lupus Reach and Plow Boy Bend, 6240 shares of mattress (lumber), 9660 cu. yds. of stone, 192,500 ft. piles; Massman Construction Co., New York Life Bldg., Kansas City, Mo., at \$63,642, for 2900 ft. of standard pile clump dikes in Missouri River at Euphrase and Saline City Bends, 2620 squares of mattress (lumber), 5130 cu. yds. of stone, 84150 ft. of piles; Bilbourn, Bower & Peters, Inc., Rwy. Exchange Bldg., St. Louis, at \$102,921, for 4900 ft. of standard pile clump dikes in Missouri River at Richeport Beach and Searceys Bends, 4500 squares of mattresses (lumber), 6550 cu. yds. of stone, 124,750 ft. of piles. 7-17

Mo., East Prairie—War Dept., U. S. Engineer Office, Box 97, Memphis, Tenn., let contract to Wills Construction Co., 6029 Clemens Ave., St. Louis, for constructing approx. 166,700 cu. yd. earthwork in Birds Point-New Madrid Floodway Levee; cost \$16,100.

Mo., Kansas City—Robert T. Stokes, Inc., capital \$25,000, incorporated; Robt. T. Stokes, 7015 Edgevale Rd.; roofing materials.

Mo., Kansas City—Park Bd. employed Boyle Construction Co., 226 W. 39th St., to remove bluff on Main St., in connection, with improvements to east portion of Liberty Memorial site; cut natural rock terraces; grade and improve north approach to Memorial Bldg.

N. C., Wilmington—Edw. C. Craft, granted permission by U. S. Army Engrs. to construct wharf on inland waterway about 1700 ft. south of Wrightsville Beach; 250 ft. long; 4 ft. wide with T-end of 10x20 ft.

Tex., Fort Worth—Fort Worth Structural Steel Co., 2400 W. Seventh St., reported, has contract for 105 tons fab. struc. steel for grain elevator addition, Universal Mills; C. M. Davis, Cotton Exchange Bldg., Gen. Contr. 7-7

Va., Craddock — Craddock-Norfolk County Chamber of Commerce plans erecting public swimming pool; conc.; 90x30 ft.; wading pool for children; location not selected.

Va., Hopewell—Fred Kelly, Sec., Chamber of Commerce, P. O. Box 248, develop harbor for pleasure and other small craft, serve cities of Richmond, Petersburg, Hopewell and a distance of 55 miles east; will use small marine railway; will secure site for outside capitalists.

Miscellaneous Enterprises

Ark., Texarkana—Trichicide Chemical Co., incorporated; J. Raymond Dodson, Texarkana, Tex.; W. C. Felder, Dallas.

Fla., Fort Lauderdale—D. E. Piper interested in organizing company for manufacturing roofing and composition shingles, proposed location at Port Everglades, near Fort Lauderdale. See Want Section—Machinery and Supplies, and Miscellaneous.

Fla., Green Cove Springs—Walcott Publishing Co. incorporated; J. Holland, H. H. Walcott.

Fla., Jacksonville—Owl National Lamp Co., of Florida, Inc., chartered; V. Williamson, J. F. Broome, W. Y. Broome.

Fla., Miami—Simplex Scale & Novelty Co., capital \$10,000, incorporated; W. B. Heidt, G. W. Kelly, J. H. Barter; novelties.

Ga., Atlanta—Pittsburgh Plate Glass Co., 180 Alabama St., S. W., leased building 172-4 Marietta St., N. W., 3-stories and basement, and will remodel; plans by C. E. Jee, Engr., care of Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Ga., Valdosta—Valdosta Abattoir Co., Inc., capital \$15,000, incorporated; O. P. Copeland, P. W. McLeod; acquired plant from W. W. Dasher and W. L. Jones.

Ky., Lexington—Brook Electrical Engineering Co., Inc., increased capital \$15,000 to \$30,000.

Ky., Louisville—Kentucky Macaroni Co., 2501 S. Floyd St., let contract to J. D. Jenkins to erect 1 story brick addition to plant; L-shape; cost \$38,000; D. X. Murphy and Bro., Archts., Louisville Trust Bldg.

Ky., Louisville—Kentucky Home Life Insurance Co. organized with \$500,000 capital stock, by W. B. Harrison, 1460 St. James Ct.; Hugh J. Caperton; will take over Inter-Southern Life Insurance Co. 6-9

La., New Orleans—E. H. Clark, will rebuild burned dairy plant at Mascot Farms, Bayou Terre aux Boeufs, St. Bernards Parish.

Mo., St. Joseph—Bushman-Nelson Co. incorporated; Jos. R. Bushman; construction.

Mo., St. Louis—Hartmann Sunlight Bakery, Inc., chartered; Ferdinand Hartmann, 1015 McCausland.

Mo., St. Louis—Vogel Cosmetics, Inc., chartered; Willard R. Vogel, 4061 Girards St.

N. C., Charlotte—Solar Lamp Co., incorporated; George L. Bagby, W. L. Bagby.

N. C., Charlotte—Chamber of Commerce, C. O. Kuester, Mgr., co-operating with industrial interests in working out preliminary plans for cheese plant.

N. C., High Point—Industrial Lithographing Co., High Point, Harvey Mills, southeastern manager, establish plant at 111 S. Hamilton St., for manufacture dry transfers used by hosiery mills.

N. C., Kinston—Brooks Warehouse, Inc., capital \$25,000, incorporated; J. R. Brooks, C. B. Brooks.

Okla., Oklahoma City—Superior Homes, Inc., capital \$125,000, incorporated; O. W. Dickerson, Oil Exchange Bldg.

S. C., Greenville—Lucky Strike Mfg. Co., incorporated; George Saltzman; shirts.

Tenn., Lawrenceburg—C. F. Merryman, of Merryman & Wilson Co., Union City, has contract for plumbing and heating in shirt plant under construction for Salant & Salant, Inc., 476 Knickerbocker Ave., Brooklyn, N. Y. 5-19

Tex., Beaumont—Double-Dip Ice Cream Co., 1701 Cedar St., Fred Noel, V. P., Houston, plans \$25,000 ice cream plant and district distribution center, probable location Railroad Ave.; preliminary sketches being prepared.

Tex., Dallas—Modern Homes Insulators, Inc., capital \$10,000, incorporated; A. J. Newton, N. E. Mays.

Tex., Pampa—Pampa Daily News, Inc., capital \$99,000, incorporated; Olin E. Hinkle, J. L. Nunn.

Tex., San Antonio—Hindman Construction Co., capital \$10,000, incorporated; H. M. Ainsworth, S. B. Hindman, 1642 W. Heusche St.

Va., Danville—Danville Laboratories, Inc., capital \$10,000, incorporated; H. S. Rodden.

Va., Salem—A. I. N. Corp., capital \$20,000, incorporated; J. N. Garst, Sebring, Fla.; medicines.

Motor Bus Lines and Terminals

Ga., Augusta—Greyhound Lines, 1157 S. Wabash Ave., Chicago, Ill., reported, plans union terminal to be used by Greyhound, Garden City Coach Co., White Stage Line, Georgia Motor Line, Southern Stages, Vidalia-Augusta Bus Line and East Coast Stages, all operating through Augusta. 6-16

Tex., Dallas—Highway Motor Freight Lines incorporated; W. B. Williams, 2521 Stephenson St.; Wayne Davis, Jr.

Railway Shops and Terminals

Md., Baltimore—Baltimore & Ohio Railroad, R. Mather, Asst. to Ch. Engr., let contract to McCloskey & Co., 1620 Thompson St., Philadelphia, for conc. coal pocket, 320 W. 23rd St.; \$80,000; site 139 x 327 ft.

Roads, Streets and Paving

Proposed Construction

Ala., Jasper—Walker County Board of Revenue authorized grading and straightening of Comack Mill Road for connection with Great Southway.

ARKANSAS—State Highway Comsn., Dwight H. Blackwood, Chmn., Little Rock, expend \$5,500,000 for road construction between Sept. 1 and Dec. 31.

ARKANSAS—State Highway Comsn. meets Aug. 12 to apportion Federal aid totaling about \$5,500,000.

Fla., Cocoa—Brevard County Commrs. open bids Aug. 2 for grading Canaveral Harbor Road; one-half mile.

GEORGIA—State Highway Board, J. W. Barnett, Chmn., Atlanta, to expend more than \$5,000,000 for highway construction for ensuing year; award initial contracts totaling \$2,000,000 Aug. 15; let additional contracts at rate of \$1,000,000 each month.

La., New Orleans—Commission Council considering surfacing Frenchmen St., Pelopidas to New York St.; Nashville Ave., S. Claiborne Ave. to Danneel St.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids Aug. 2 for project in following county:

Baltimore—3.97 mi. conc. base and head-ers, Reisterstown Rd., Cont. B-253-411.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, has low bids for projects in following counties:

Charles—8.54 mi. conc. shoulders, Waldorf to La Plata, Cont. Ch-119-811, Southern Maryland Construction Co., 20 E. Lexington St., Baltimore, \$49,614;

Cecil—Conc. floor for 94-ft. 6-in. span under construction over Little Elk Creek, on Elkton-Childs Road, Cont. Ce-83-2-22, Fideli Construction Co., 502 Lynhurst St., Baltimore.

Md., Aberdeen—Commanding Officer, Aberdeen Proving Ground, let contract to Frank Maxa & Son, Aberdeen, for rein. conc. roadway; \$7900.

Md., Baltimore—City rejected bids on Cont. 625 for 5500 sq. yd. granite block; new bids about Aug. 10; Geo. Cobb, Highway Engr. 6-16

Md., Towson—Baltimore County Commrs., John R. Haut, Ch. Clerk, opens bids Aug. 2 for conc. shoulders on Valley Road, Providence Road east one mi.; Group 3.

MISSISSIPPI—State Highway Comsn., E. D. Kenna, Director, Jackson, opens bids Aug. 9 for work in following county:

Perry—1.9 mi. Laurel-Richton Road, Order 315; 24,000 cu. yd. excav., 29.18 cu. yd. A conc.; 3064 lb. rein. steel; 659 mi. Bermuda sodding; 20 units right-of-way markers; 49,200 ft. b. m. creos. lumber; 2170 ft. b. m. Z.M.A., or Wolmanized lumber; 2360 lin. ft. creos. piling.

MISSISSIPPI—State Highway Comsn., E. B. Kenna, Commr., to launch \$4,000,000 road construction program soon.

MISSOURI—State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City, ordered oil mat surface on Hwy. 67 between state line and Fredericktown, 96 mi.; and on Hwy. 60, between Poplar Bluff and Willow Springs; \$150,000.

Mo., Clayton—St. Louis County, Roy Ja-

blonsky, Surveyor and ex-officio Highway Engr., opens bids Aug. 3 for improving Woodson Road, Lackland Road to tracks of Public Service Co.

Mo., St. Joseph—Buchanan County, Ray V. Land, Asst. Hwy. Engr., plans paving 36th St.

Mo., St. Louis—City widen Market St.

North Carolina—Forest Service, Washington, D. C., to furnish dynamite and material in connection with road construction in Pisgah National Forest.

N. C., Greensboro—City considering widening W. Market St., Library Place to Edgeworth St.

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, has apparent low bids for projects in following counties:

Jackson—5.554 mi. grade and drain, U. S. 62, Duke extending west, F 258-A, Kadane Construction Co., Frederick, \$11,303; bridge, same stretch, F 258-A, bridge, Kadane Construction Co., \$17,788;

Harmon—7.319 mi. grade and drain, U. S. 62, Harmon-Jackson County line west, F 258-A, Kadane Construction Co., \$19,078; two bridges, same stretch, T. C. Ottinger, \$3513. 7-14

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, opens bids Aug. 2 for projects in following counties:

Grant—6.005 mi. grading and drainage and four bridges, Hwy. 11, Medford east, F. A. P. 315-A; roadway includes 105,755 cu. yd. excav., 418 cu. yd. A conc., 33,834 lb. rein. steel, 260 lin. ft. R. C. pipe; bridges, 521.4 cu. yd. A conc., 44,480 lb. rein. steel; 4,966 mi. grading and drainage and two bridges, Hwy. 11, between Medford and Blackwell; roadway including 86,122 cu. yd. excav., 283.23 cu. yd. A conc., 23,328 lb. rein. steel, 228 lin. ft. R. C. pipe; bridge, 163.72 cu. yd. A conc., 15,426 lb. rein. steel;

Harmon—14.938 mi. grading and drainage structure, Hwy. 9, west of Vinson, S. A. P. 73,667 cu. yd. excav., 37,58 cu. yd. A conc., 673 A & B; A, roadway, 7,939 mi., includes 628 lb. rein. steel, 220 lin. ft. R. C. pipe, 59.5 M. ft. b. m. creos. struc. timber; B, roadway, 6,999 mi., 119,327 cu. yd. A excav., 23,112 lb. rein. steel, 508 lin. ft. R. C. pipe, 26.1 M. ft. b. m. creos. struc. timber; B, 3 bridges, 500 cu. yd. excav., 75.6 cu. yd. AA conc., 10,480 lb. rein. steel, 240 lin. ft. R. C. hand rail, 51,600 lb. struc. steel, 1740 lin. ft. creos. timber piling, 19 M. ft. b. m. struc. timber; B, 1 bridge, 340 cu. yd. A conc., 27,500 lb. rein. steel;

Lincoln—bridge, west of Meeker, S. A. P. 830; 200 cu. yd. A excav., 97.8 sq. yd. rein. conc. approach slab, 112.3 cu. yd. A conc., 51 cu. yd. AA conc., 17,230 lb. rein. steel, 10,000 lb. struc. steel, 190 lin. ft. untreated timber piling;

Payne-Lincoln—16.724 mi. drainage and grading, Hwy. 48, S. A. P. 822, A, B and C, between Stroud and point west of Drumright; A, 16.724 mi., 76,244 cu. yd. A excav., 30,971 C excav., 162 creos. timber ditch checks, 773 cu. yd. A conc., 63,447 lb. rein. steel, 228 lin. ft. R. C. pipe; B, 6.982 mi., 90,682 cu. yd. A excav., 21,076 cu. yd. C excav., 689.48 cu. yd. A conc., 49,050 lb. rein. steel, 328 lin. ft. R. C. pipe; C, 3.435 mi., 40,806 cu. yd. A excav., 5428 cu. yd. C excav., 499.23 cu. yd. A conc., 40,416 lb. rein. steel, 244 lin. ft. R. C. pipe.

TENNESSEE—Dept. of Highways and Public Works, R. H. Baker, Commr., Nashville, opens bids Aug. 12 for mixed-in-place surface estimated to cost \$125,000 in following counties:

Bradley—14.1 mi., between Cleveland and Georgia State line;

Campbell-Claiborne—15 mi., between La Follette and Speedwell;

Lincoln—12 mi., between Fayetteville and Alabama State line;

Meigs—17.2 mi., between Decatur and Roane County line;

Monroe—5.5 mi., between Madisonville and McMinn County line.

Tenn. Nashville—City Council appropriated \$100,000 for extension of Union St., Second Ave. to First Ave.

TEXAS—State Highway Dept., Gibb Gil-

christ, Engr., Austin, expend \$22,067 for double bituminous surface on Hwy. 8, Maud to Douglasville, in Bowie and Cass counties; \$610,886 for improving Hwy. 1, in El Paso Midland, Ector, Crane, Martin and Ward counties.

TEXAS—State Highway Comsn., Austin, appropriated \$226,000 for widening and surfacing Dryden and Sabine roads, sectors of Galveston-Port Orange Beach Route.

TEXAS—State Highway Comsn., Gibb Gilchrist, Engr., Austin, opens bids Aug. 2 for projects in following counties: Double bituminous surface treatment, unless otherwise designated;

Bowie and Cass—M-1-C4, Hwy. 8; 10.21 mi., 113,807 sq. yds.;

Bowie—M-1-G-5, Hwy. 1; 2.60 mi., 28,981 sq. yd.;

Titus and Camp—M-1-P-6, Hwy. 65; 11.0 mi., 129,063 sq. yds.;

Titus—M-19-A, Hwy. 49; 1.76 mi., 19,008.0 sq. yds.;

Wise—M-2-W-3, Hwy. 24; 11.09 mi., 117,200 sq. yds.; M-10-X-5, Hwy. 64; 1 mi., 11,730.0 sq. yds.;

Harrison—M-10-J-6, Hwy. 43; 9.35 mi., 109,707.0 sq. yds.; 5485 sq. yds. aggregate for surface treatment;

Ector—M-6-T-3, Hwy. 137; 17.045 mi., 189,994.9 sq. yds.; four-tenths gal. seal coat;

Brazoria—M-12-F-5 Hwy. 58; cleaning and painting bridge over Onazos River; M-12-G-5 Hwy. 36, cleaning and painting bridge over diversion Channel of Brazos River near Freeport;

Fort Bend—M-12-H-5, Hwy. 3, cleaning and painting bridge across Brazos River east of Richmond;

Jefferson—M-12-R-4, Hwy. 3; 15.20 m., 151,590 sq. yds. spec. seal coat;

Panola—M-10-C-6, Hwy. 149; 9.04 mi., 98,982 sq. yds.

Tex., San Diego—Duval County Commrs. Court authorized funds for road from Freer to Benavides.

VIRGINIA—Dept. of Highways, Richmond, eliminate grade crossing and old Chesapeake and Ohio bridge at Eagle Rock; re-route Hwy. 17 over new bridge.

Contracts Awarded

FLORIDA—State Road Department, H. H. Wells, Chmn., Tallahassee, let contracts for projects in following counties:

Hendry—12.69 mi. surface treatment, Hwy. 25, Proj. 806DC, A. O. Greynolds, West Palm Beach, \$22,564; 11 mi. Hwy. 25, Proj. 866-C-A-O, Greynolds, \$19,321;

Madison—12.88 mi. surface treatment, Hwy. 25, Proj. 623, Coastal Roads Co., \$21,534;

Putnam—14.91 mi. surface treatment, Hwy. 28, Proj. 706-B, Coastal Roads Co., \$23,813;

Gadsden—121-ft. creosoted timber span Proj. 918-B Thomas Roberts, Sochoppy, \$3561;

Hardee—101-ft. bridge, with conc. piers, Proj. 977-B, Hiram McElroy, Tampa, \$7557;

Alachua—1.50 mi. conc., Proj. 1094, University of Florida grounds, J. B. McCrary Corp., Atlanta, \$59,467; 56,523 gal. oil asphalt, 2000 cu. yd. conc. material, M. N. Thomas, Ocala, \$7400, Atlantic Refining Co., \$2900;

Leon—.9 mi. conc.; Proj. 1095, Florida State College, J. B. McCrary Corp., \$26,090;

Alachua—2000 cu. yd. cover material, Hwy. 13, Proj. 817, M. M. Thomas, Ocala, \$7400;

Levy—40,000 gal. oil asphalt, Atlantic Refining Co., \$6,076; 5500 cu. yd. cover material, Hwy. 5, Proj. 868, Standard Rock Co., Standard Fla., \$22,000;

Okeechobee—246,000 gal. asphalt, Proj. 912, Atlantic Refining Co., Atlanta, Ga., \$17,212;

Seminole—metal pipe, Hwy. 3, Proj. 85, Tristate Culvert Mfg. Co., Atlanta, \$2,041; Dixie Culvert & Mfg. Co., Jacksonville, \$2,039.

Md., Baltimore—City let contract to Arundel Construction Co., 910 Trinity St., for Cont. 628; 9750 sq. yd. cement conc.; \$14,037.

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, let contracts for work in following counties:

Comanche—1.144 mi. grade, drain and 20-ft. 10-7-10-in. rein. conc. pavement, U. S. 2, Lawton extending west, Standard Paving Co., Tulsa, \$30,070;

Jefferson—5.968 mi. grade, small drainage structure, U. S. 70, between Waurika and Ringling, F 218-B, G. A. Nichols, Oklahoma City, \$20,185; 5.332 mi. grade and drain, U. S. 81, between Waurika and Ryan, 244-H, G. A. Nichols, \$32,013; 3 bridges, same stretch, F 244-H, bridge, C. S. Constant & Co., Dallas, \$9861; 6.841 mi. grade and drain, U. S. 81, Waurika south, F 244-G, G. A. Nichols, \$28,043; 4 bridges, same stretch, F 244-G, bridge, C. S. Constant & Co., \$17,965. 7-14

Okl., Oklahoma City—City, L. M. Bush, City Engr., let contract for repairing city streets in current fiscal year to O. H. Holland and Western Paving Co.; asphaltic conc. and conc. slab and base.

TEXAS—State Highway Comsn., Gibb Gilchrist, Engr., Austin, let contracts for projects in following counties:

Anderson and Henderson—7.1 mi. iron ore and asphalt treatment, Frankston to near Poynor, Route 40, R. W. King, Nacogdoches, \$67,179;

Atascosa—22.8 mi. crushed gravel base with double bituminous treatment, Jourdanon southwest of San Miguel Creek, Heldenfels Brothers, Rockport, \$123,395;

Childress—8.7 mi. conc., Cottle County line to Childress, Hwy. 4, L. E. Whitham & Co., Wichita Falls, \$117,639;

Colorado—11.1 mi. grading and drainage structures, Altair to Columbia, Standifer Brothers, Big Wells, \$24,195;

Cottle—12 mi. conc., Dunlap to Childress County line, Hwy. 4, L. E. Whitham & Co., \$167,015;

Dallas—1.3 mi. special gravel, Hwy. 121, Tarrant County line to Denton County line, Ernest Lloyd, Fort Worth, \$4393; widening shoulders and flattening slopes, Hwy. 40, 2.1 miles from south city limits of Dallas, C. A. and S. W. Viddig, Jr., Dallas, \$4866;

Erath—Hwy. 10, Paluxy Creek bridge, Ernest Lloyd, Fort Worth, \$18,765;

Fannin—Hwy. 5, Little Caney and Big Caney Creek bridges, Purvis and Bertram, Fort Worth, \$18,439; 12 mi. grading and drainage structures, Grayson County line to Bonham, Hwy. 5, Buckner Brothers, \$41,735; 3.4 mi. conc. pavement, Hwy. 5, Bonham east, General Construction Co., Capps Bldg., Fort Worth, \$58,353;

Navarro—10.8 mi. conc., Hwy. 31, near Powell to Trinity River bridge, Union Paving Co., Black Horse, Philadelphia, Pa., \$174,150;

Freestone—3 mi. grading and drainage structures and conc. pavement, Teague northeast, T. L. James, Ruston, La., \$58,571;

Gonzales—Hwy. 3, A. T. and N. O. underpass near Harwood, R. B. Butler, Bryan, Texas, \$12,225;

Gregg and Upshur—Hwy. 15, Big Sandy, Whiteoak and Glade Creek bridges, Purvis & Bertram, \$39,071;

Harrison and Panola—Hwy. 43, Sabine River relief bridge, Austin Bridge Co., 1813 Clarence St., Dallas, Texas, \$76,692;

Haskell—15.4 mi. conc. pavement, Knox County line to Rule, Hwy. 51, L. E. Whitham Co., Wichita Falls, \$201,675;

Jefferson—Hwy. 87, maintenance Keith Lake Bridge, Austin Bridge Co., \$6560;

Jim Wells and San Patricio—5.5 mi. conc. base course and caliche base course, La Fruta to Mathis, Route 12, R. W. Briggs & Co., Pharr, \$69,220;

Kerr—Hwy. 81, Quinlan and No Name Creek bridges, D. H. Buchanan, Temple, \$9195; 6.9 mi. grading and small drainage structures, Kerrville north to Gillespie County line, Hwy. 81, J. P. Foty, Burt Bldg., Dallas, \$45,569;

Liberty—14.7 mi. grading and drainage structures, Hwy. 132, Liberty north to Miss Hill, Martin Brothers, Beaumont, \$41,325;

Lipscomb—Hwy. 117, Darronzett Creek bridge, W. S. Crawford Co., 4123 Avondale St., Dallas, \$35,850;

Colorado—Hwy. 71, Ratliff Creek Bridge, Earl Yates & Son, \$17,105;

Liveoak—16.6 mi. conc., caliche and gravel base courses, near Three Rivers to west of Georgetown, Hwy. 66, F. P. McElwraith Construction Co., Corsicana, \$220,737;

Madison—5.5 mi. conc., North Zulch to near Navasota River, Hwy. 21, J. P. Foty, \$90,535;

Milam—Hwy. 69, Harl Creek bridge, R. B. Butler, Bryan, \$537;

Ochiltree—17.5 mi. caliche and limestone base courses, Hansford County line northeast to Perryton, Hwy. 117, Davis & Sons, Abilene, Texas, \$70,547;

Panola—6.7 mi. conc., Carthage to Murvalle Creek, Route 8, T. S. Clements, 332 Columbia St., Shreveport, La., \$109,666;

Rains—9.3 mi. double bituminous surface treatment, Hwy. 42, Wood County line to Emory, N. P. Turner, Marshall, \$16,765;

Tarrant—4 mi. grading, drainage structures and conc., Trinity River bottoms, Hwy. 10, General Construction Co., \$17,319;

Terrell—8.5 mi. grading and drainage structures, 9.5 mi. southeast of Dryden to 18 mi. southeast of Dryden, Thomson & Simpson, San Antonio, \$19,496;

Upshur and Gregg—Hwy. 15, 9.5 mi. grading and small drainage structures, Big Sandy to Gladewater, J. G. Newkirk, Rusk, \$54,517;

Uvalde—Hwy. 3, Sabine River bridge, Kelly & Isaacs, Waco, \$33,776; Hwy. 3, Nueces River bridge, Kelly & Isaacs, Waco; bridge over Nueces river and relief bridge on Hwy. 3, Missouri Valley Bridge and Iron Co., Dallas, \$167,778; steel spans to Petroleum Iron Works, Beaumont, \$32,743.

WEST VIRGINIA—State Road Comsn., Charleston, let contracts for projects in following counties:

Monongalia—6.6 mi. conc., Route 73, between Uffington and Smithtown, Tri-State Engineering Co., Waynesburg, Pa., \$104,595;

Wetzel—3.8 mi. grade and drain, Route 250, Hundred-Cottontown Road, Sam Polino, Elkins, \$103,307;

Cable—1.4 mi. approaches, overhead bridge, John A. Archer and Son, Ivanhoe, Va., \$26,912.58;

Barbour—4.44 mi. Philippi-Clarksburg rd., stone base, Charley Sargent, Middlebourne, \$30,290;

Hancock—4.46 mi. Arroyo-Newell road, grade and drain, Weirton Construction Co., Weirton, \$94,744.14;

Jackson—4.43 mi. Mason County line to Evans road, grade and drain, Construction Engineering Co., Charleston, \$65,851.34;

Mason—8.2 mi. Flat Rock-Jackson County line road, grade and drain, Construction Engineering Co., \$154,952.43;

Upshur—11.0 mi. Buckhannon-Elkins road, stone base, Echols Brothers and Pendleton Construction Co., \$149,149.56;

Preston—3.9 mi. Evansville-Newburg road, grade and drain, A. A. Bostic & Co., 507 Bridge St., Huntington, \$63,300;

Wayne—4.16 mi. Lavalette-Wayne road, grade and drain, Pinnell & Pfost, Ripley, \$61,116.14;

Webster—35 mi. approaches, Webster Springs bridge, W. E. Rafferty, Newton, \$7,783.85. 7-14

Sewer Construction

Ga., Atlanta—Dr. T. F. Abercrombie, State Health Officer, and representatives of Atlanta suburban municipalities and Fulton and DeKalb counties, plan modernizing metropolitan sewage system.

Ky., Louisville—Commissioners of Sewerage of Louisville, Inc., Woolsey M. Caye, Tech. Engr., 400 M. E. Taylor Bldg., advises it is probable that plans will not be ready for distribution to contractors until some time between Aug. 1 and 15 on constructing another section of Southwestern Outfall sewer from Cane Run Rd. to point west of Dixie Highway, and bids will not be received until some time about Sept. 15; cost \$1,000,000. 7-21

La., New Orleans—Sewerage and Water Bd., 526 Carondelet St., receives bids July 28 for terra cotta pipe and specials.

Md., Baltimore—City let contract to Gray Concrete Co., Dundalk, at \$16,843, for rein. conc. pipe; Materials Cont. 90.

Telephones and Radio

Ky., Louisville—Radio Service System Corp., capital \$10,000, incorporated; Roger M. Dearing, E. Leon Wootten.

Tex., Childress—Central Texas Telephone Co., increased capital \$35,000 to \$60,000.

Textile Mills

La., New Orleans—George J. Glover Co., Inc., Whitney Bldg., Gen. Contr. for mill building for Lane Cotton Mills, on which foundation work is under way and brick work is soon to start, let following subcontracts: Southern Scrap Material Co., 4144 Bienville St., found. rein. steel; J. M. Bartholomew, 300 Millaudon St., hauling brick; St. Joe Brick Works, Canal Bank Bldg., common brick; O'Neill & O'Dowd, 319 Octavia St., masonry labor; J. J. Clarke Co., Inc., 1639 Julia St., lime; Service Foundry, Inc., 1153 S. Peters St., cast iron washers; Shilstone Testing Laboratory, 510 Gravier St., all New Orleans, concrete, concrete supervision; Acme Building Supply Co., Meridian, Miss., millwork; John J. Palmisano, 1928 Pine St., New Orleans, La., hauling sand & gravel; Paul Wright & Co., Brown-Marx Bldg., Birmingham, Ala., cast iron columns; R. F. Mestayer Lumber Co., Inc., 1432 Gov. Nichols St., New Orleans, La., lumber; Jones & Laughlin Steel Corp., P. O. Box No. 66, New Orleans, La., structural steel; John J. Palmisano, 1928 Pine St., New Orleans, La., interior filling; J. Watts Kearny & Sons, 512 S. Peters St., New Orleans, La., cement; American Brick Co., Inc., 416 D'Hemecourt St., New Orleans, La., sand, gravel; Standard Supply & Hdwe. Co., 822 Tchoupitoulas St., New Orleans, La., common nails; 2 stories, 300x180 ft.; Favrot & Livaudais, Ltd., Archts., Nola Bldg. 7-21

Md., Baltimore—Wm. E. Hooper & Sons Co. installing 1000 h. p. Diesel engine made by McIntosh & Seymour Corp., Auburn, N. Y., direct connected to electric generator; ultimate plans call for installation at least one more similar unit; to furnish electric power for driving mill machinery.

N. C., Reidsville—Burlington Mills Co., Burlington, reported, leased and will operate Klotz Silk Mills.

Water Works

D. C., Washington—Sec. of War, Patrick J. Hurley, and Maj. Gen. Lytle Brown, Ch. of Engrs., considering plans for increasing water supply of District by \$45,000,000 gal.; \$150,000 available; erect proposed dam at west end of Dalecarlia Reservoir; specifications drawn up in office of Maj. Jos. D. Arthur, Jr., Dist. Engr. for War Dept., Washington area.

Fla., Fort Pierce—City Comsn. will continue dredging work now under way for distance of 3 miles, provide more adequate supply of wetar.

Ga., Augusta—City, W. H. Wise, City Engr., considering improvements to water system; cost \$428,000.

Ga., Jasper—City has preliminary plans in progress by J. B. McCrary & Co., Engrs., 22 Marietta Bldg., Atlanta, for water supply and well system; cost \$27,000; plans expected to be ready for distribution Aug. 15. 4-21

Miss., Columbia—Bd. of Aldermen closed contract with Mississippi Power Co., Gulfport, for installing electric pumping plant.

Miss., Water Valley—Board of Aldermen and Mayor F. B. Deshon let contract to Layne Central Co., Chelsea Ave., Memphis, Tenn., for 600-gal. per minute water well.

Woodworking Plants

Va., Christiansburg—Community Furniture Co., capital \$15,000, organized with J. E. B. Smith, Pres.; C. R. Smith, Sec.-Treas.; acquired and will operate Phoenix Novelty Furniture Corp.

FIRE DAMAGE

Ark., Forrest City—Forrest City Cotton Oil Mill Co., subsidiary of Armour & Co.; loss \$25,000.

Fla., Tampa—Two buildings of Tampa Mill and Supply Co., Packwood Ave. and Horation St.; owned by Federal Reserve Bank of Atlanta, Ga.; loss \$45,000.

Fla., Titusville—Hill Motor Co.'s storage

garage, Clark Yates, Mgr.; George W. Seobie, Jr., owner; loss \$10,000.

Ga., Augusta—Augusta Abbatoir, owned and operated by L. Scharff, 2715 Walton Way.

Ga., Cedartown—Borden Wheeler Springs Hotel, owned by Charles W. Smith, Jr.; loss \$50,000.

Ga., Eatonton—Dwelling of D. W. Bear-den.

Ga., West Point—Fairfax Auditorium, Telephone Exchange; loss \$25,000.

Ga., Weston—Barn owned by B. S. Miller, Columbus.

Ky., Springfield—Farmers Tobacco Warehouse, building owned by Western District Warehousing Corp., leased by H. E. Litsey; loss \$12,000.

La., New Orleans—Dairy plant at Mascot Farms, at Bayou Terre aux Boeufs, St. Bernards Parish, E. H. Clark, owner; loss \$20,000.

Md., Crisfield—L. E. P. Dennis & Sons, fish plant on Jones Island, Annapomessix River.

Miss., Bentonla—Bentonla Hotel; R. Hancock, Propr.; loss \$10,000.

Miss., Tchula—Unit at Belmont Farm,

prison camp of Mississippi State Penitentiary; O. G. Tann, Mgr.

Mo., Lilbourn—Robinson Lumber Co.'s yard, Lilbourn Milling Co.'s buildings; owned by S. B. Camp, leased to J. R. Grabenhorst; loss \$27,000.

Mo., St. Louis—Paint plant of Certain-teed Products Corp., 1531 N. 11th St.; loss \$25,000.

N. C., Elizabeth City—Cartwright's Bakery.

N. C., Gastonia—Dwelling of Robt. Lineberger, Union Rd.; loss \$9,000.

S. C., Landrum—People's Ginnery, A. P. Caldwell, Mgr.

Tenn., Nashville—Portion of covered race track and several buildings, Tennessee State Fair Grounds; loss \$20,000.

Tex., Comanche—Hotel Carter.

Tex., Corsicana—Grand Theater, owned by R. S. Neblett Estate, leased by C. J. Musleman, Paris; loss \$10,000.

Tex., Flatonia—Cowdin Grocery Co.'s warehouse.

W. Va., Charleston—Show room, garage and office of Stewart-Calhoun Motor Co., Inc., Virginia and Dunbar Sts.; building owned by Charles Midelburg.

Rd., for gate lodge, 22 x 60 ft. and residence 40 x 80 ft., on Flamingo Drive facing Indian Creek; cost \$25,000; bids opened July 26.

7-21

Ga., Atlanta—Harold McKenzie Co., 2967 Peachtree Rd., erect residence Arc Way; 1 story and basement; conc. found.; brick veneer walls; hardwood and tile floors; hot air heating.

Ga., Atlanta—Clifford P. Bentley, Peters Bldg., plans rebuilding burned residence 3700 Peachtree Rd.; 2 stories and basement; conc. found.; brick veneer walls; slate roof; hardwood and tile floors; steam heat.

Ga., Macon—John H. Sherwood, Wesleyan Drive, Rivoli, plans rebuilding burned residence.

Md., Baltimore—Charles J. Krause, Jr., erect 3-story brick dwellings with garages, 4209-13 Frederick Rd.

Md., Baltimore—Superior Construction Co. erect 5 brick dwellings with garages, 3800 Menloe Drive.

Md., Catonsville, Baltimore—Linthicum Realty Co., Seth Linthicum, 20 E. Lexington St., receiving bids for duplex residence; Bernard Evander, Archt., 20 E. Lexington St., Baltimore.

N. C., Gastonia—Edward Summerrow erect residence in Fairmont Park.

Tex., Dallas—J. B. Turner erect 2-story, brick veneer residence S. E. Cor. Preston Rd. and Potomac; cost \$13,500.

Tex., Dallas—Elbert Williams, erect dwelling 2805 McFarlin Blvd.; cost \$37,000.

Tex., Dallas—Mrs. Josephine Pastire, has plans by F. F. and C. F. Peterman, Archts., for 2-story, brick veneer and tile roof residence on Northwest Highway; cost \$35,000.

Tex., Dallas—Mrs. Alex Weisberg, Argyle Apts., erect \$37,500, dwelling on Turtle Creek Blvd., University Park.

Tex., Dallas—Stanley Zercher, Claremont at Windsor, E. Dallas, erect dwelling.

Tex., Highland Park, Dallas—Charles Barnett, 4440 Fairfax, has permit for dwelling.

Tex., Highland Park, Dallas—Artie R. Nash, 3311 Beverly Drive, erect residence.

Tex., Houston—W. L. Clayton, 5300 Caroline St., erect 2 story garage and servants rooms at residence, Oakdale Ave. and Caroline St.; remodel garage into guest residence; cost \$15,000.

Tex., Houston—Wallace E. Pratt, 4407 Mt. Vernon St., erect \$36,225 stucco dwelling 1632 Lazy Lane, River Oaks.

Government and State

Ala., Auburn—Following prospective estimators on post office, bids Aug. 9 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Upchurch Construction Co., Bell Bldg., Montgomery, Ala.; E. C. Coston Construction Co., 3019 Sixth Ave., Birmingham, Ala.; D. T. Underwood, Lincoln Life Bldg., Birmingham, Ala.; Chambers & Hightower, Athens, Ala.; J. M. Johnson, 512 N. Sixth St., Birmingham; W. H. Mayben & Sons, aGdsden, Ala.; J. W. Chambers Lumber Co., Athens, Ala.; Norwood-Griffin Co., 847 Boulevard Circle; Barge-Thompson Co., 136 Ellis St., N. E., both Atlanta. 7-14

Ark., Pine Bluff—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids Aug. 16 for extension and remodeling post office; \$55,000.

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., opens bids Aug. 9 for elevator plant, in connection with remodeling and enlarging post office.

D. C., Bolling Field, Anacostia—Capt. J. L. Alverson, Constructing Quartermaster, opens bids Aug. 10 for constructing 1.6 mi. four-way duct and two 3-conductor, 13,200-volt feeders.

D. C., Washington—Navy Department, Bureau of Yards and Docks, receives bids Aug. 3 for laboratory at Naval Observatory.

D. C., Bolling Field, Anacostia—Capt. J. L. Alverson, Constructing Quartermaster, opens bids Aug. 18 for one field officers' quarters and 10 company officers' quarters.

D. C., Bolling Field, Anacostia—Capt. J. L. Alverson, Constructing Quartermaster,

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

Okl., Wewoka—Knights of Pythias having plans prepared by F. A. Duggan, Tulsa, for lodge building; cost \$100,000; construction to begin in about 6 months.

Churches

Ky., Paducah—St. Johns' Catholic Church, Rev. Paul Barrett, Pastor, erect church on site of present building; brick and stone; 115x50 ft.; fireproof; cost \$35,000; present structure being removed; W. B. Roetteis, Gen. Contr.

Mo., Jefferson City—Capitol Ave., Christian Church, Rev. Guthrie S. Birkhead, Pastor, plans erecting educational building.

Tex., Sabinal—Church of Christ, Rev. A. Slater, Pastor, rebuild college and church buildings.

City and County

Fla., Clearwater—City, H. H. Baskin, Mayor, plans rebuilding burned community building on waterfront fill south of Cleveland St. approach to memorial causeway; auditorium will have seating capacity 200; Col. Theodore H. Skinner, Daniel Kearns and Roy Wakeling preparing plans; cost \$12,000.

La., New Orleans—Sam Stone, Jr., & Co., Archts., Masonic Temple Bldg., completed plans for French Market to be erected, Decatur St. and S. Peters St., from St. Ann St. to Baracks St., for city; will consist of 3 units, meat market, fish market and farmers market; Sam Stone, Jr., & Co., Inc., Archts., 1800 Masonic Temple, advises no further action will be taken by Commission Council until after Aug. 2. 6-30

Md., Baltimore—See Want Section—Bids Asked.

Mo., Kansas City—Park Bd. let contract to George P. Reintjes, 2517 Jefferson, to erect greenhouse in Swope Park; J. V. Lewis, Field Engr. Park Bd.

Mo., Kansas City—Keene & Simpson, Land Bank Bldg., Archts., advises plans are only in a preliminary stage for erecting \$4,000,000 courthouse. 7-14

N. C., High Point—See Want Section—Bids Asked.

Va., Richmond—City Finance Committee expending \$25,000 in improvements to First Market, Grace and Main Sts.; considering

installing refrigerating counters throughout building; Carneal, Johnston & Wright, Archts., Electric Bldg. 4-7

Va., Covington—Alleghany County plans additions and rebuilding jail; cost \$20,000.

W. Va., Clarksburg—Harrison County Comms. and Advisory Committee rejected bids for improvements to new court house grounds and will call for new bids with changes in materials and plans; contract for lighting system let to C. Ray Connor Electrical and Plumbing Co.; bids for decorative painting under consideration; action deferred also on Venetian blinds, window shades, entrance floor mats, mirrors, toilet accessories, etc. Hutter Construction Co., Fond du Lac, Wis., Gen. Contr. 9-18-31

Dwellings

D. C., Washington—David Brown, 1221 H St., N. E., erect 2-story, brick, slate roof dwelling, 6030 8th St., N. W.; hot water heat; owner builds.

Fla., Coral Gables, Miami—Carl Green, 1409 Alhambra Circle, plans erecting residence, garage, etc.; probable site N. Bay Rd., Miami Beach; 2-stories; rein. conc.; all tile roof; cost \$50,000.

Fla., Miami Beach—Dr. L. W. Elgin, 701 Huntington Bldg., Miami, has plans by Arthur Laidler-Jones, 3927 Douglas Rd., Coconut Grove, Miami, for residence, garage, etc., Alton Rd., Miami Beach.

Fla., Miami Beach—David M. Hanley, 549 N. W. 1st St., Miami, erect bungalow and garage 51st St. between Alton Rd. and Pine Tree Drive; Lester Avery, Archt., 235 N. W. 2nd St.

Fla., Miami—Bostwick Construction Co., Leonard Bostwick, 2233 S. W. 9th St., erect 5 residences Kumquat Ave. west of Douglas Rd., Coconut Grove; C. LeRoy Kinports, Archt., Kumquat Ave.

Fla., Miami Beach—John & Coulton Skinner, French Village, Coral Gables, have plans in progress for residence, garage, etc., Rivo Alto Island; residence 2-stories, 93x55 ft.; rein. conc.; conc. block; stucco construction; wood piling; conc. slab under first floor; tile roof; steel sash; tile and wood floors; 2 story entrance and stair hall; 2 car garage; deck porch with tile floor; plans complete in about 10 days; contract to be let soon.

Fla., Miami Beach—Haines-Hurst Properties, Inc., F. L. Haines, 2224 Collins Ave., has plans by C. B. Schoeply, 528 Lincoln

has low bid of \$94,333 from Blackford Co., 3606 11th St., N. W., Washington, for 8 double non-commissioned officers' quarters. 7-7

Ga., Fort Benning—Constructing Quartermaster probably go ahead with improvements involving \$750,000 expenditure, including \$163,000 for flying field improvement, \$88,000 hangar, \$10,000 gasoline storage system, \$20,000 heating plant, \$20,000 conc. aprons and barracks.

Ky., Lexington—Following additional prospective estimators on post office, bids Aug. 4 by Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.:

General—Spence Brothers, Brewer Arcade, Saginaw, Mich.; P. J. Carlin Construction Co., 405 Lexington Ave., New York; James Devault, Massillon Road, Canton, Ohio; Worsham Brothers, Medical Arts Bldg., Knoxville, Tenn.; W. T. Congleton Co., Lexington; H. R. Blagg Co., 1229 E. Third St., Dayton, Ohio; Louis des Cognets & Co., Lexington; National Construction Co., Tower Bldg., Washington; A. W. Kutsche & Co., 2111 Woodward Ave., Detroit; Banbrook-Gowan Co., 4829 Woodward Ave., Detroit; Frank Messer & Sons, 2515 Burnet Ave., Cincinnati; MacDonald Engineering Co., 1 S. LaSalle St., Chicago; Theriault Contracting Co., 534 E. Johnson St., Philadelphia; Garst-Gowen Construction Co., 15th and Dumesnil Sts., Louisville, Ky.; Dickie Construction Co., Louderman Bldg., St. Louis; Struck Construction Co., 147 N. Clay St., Louisville; Walbridge-Aldinger Co., 409 Griswold St., Detroit; H. G. Whittenburg, Washington Bldg., Louisville; Conneen Construction Co., Munsey Bldg., Washington; O. F. Miller Co., Pratt Bldg., Kalamazoo, Mich.; English Brothers, Lincoln Bldg., Champaign, Ill.; James I. Barnes, Springfield, Ohio; S. & W. Construction Co., Shrine Bldg., Memphis, Tenn.; Foster & Creighton Co., American Natl. Bank Bldg., Nashville, Tenn.; Jos. A. Tontari, First State Bk. Bldg., Chicago Heights, Ill.; Hanson Brothers Co., 127 N. Dearborn St., Chicago; Columbia Engineering Co., Equitable Bldg., Baltimore;

Elevators—Westbrook Elevator Manufacturing Co., Danville, Va. 7-21

La., Alexandria—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., having plans revised by Edward F. Neild, Archt., Shreveport, for \$250,000 post office; original appropriation \$275,000; 3 stories, brick, steel and stone trim.

La., Barksdale Field, Shreveport—Capt. George E. Lamb, Constructing Quartermaster, probably complete work involving \$2,164,200, including \$252,000 noncommissioned officers' quarters, \$609,000 quarters for 100 officers, \$474,000 for 3 barracks to accommodate 1000 enlisted men, \$225,000 hospital, \$30,000 for completion of garages, \$15,000 cold storage plant, \$350,000 for 8 hangars, \$89,200 for completion of headquarters and operations building, \$20,000 for gasoline storage system, \$100,000 for paving aprons in front of hangars.

La., Baton Rouge—Truscon Steel Co., Birmingham, Ala., furnishing double hung steel windows for post office; sheet metal work to Acme Roofing Co., 5 Lower Wetumpka Rd., Montgomery; Algernon Blair, Gen. Contr., 1st Natl. Bank Bldg., Montgomery, Ala.; Moise H. Goldstein, Archt., American Bank Bldg., New Orleans. 7-21

Mo., West Plains—State Highway Comsn., T. H. Cuter, Ch. Engr., Jefferson City, plans \$7200 maintenance building; award contract about Aug. 15.

Okl., El Reno—Department of Justice, Director of Bureau of Prisons, Washington, D. C., opens bids Aug. 25 for construction of buildings and tunnels in Group 2, U. S. Southwestern Reformatory.

N. C., Durham—Following additional prospective estimators for post office, bids Aug. 9 by Treasury Department, Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.:

General—J. A. Jones Construction Co., Commercial Bk. Bldg., Charlotte, N. C.; Algernon Blair, First Natl. Bank Bldg., Montgomery, Ala.; Ralph S. Herzog, 10 S. 18th St., Philadelphia; York Construction Co.,

Box 306, Raleigh, N. C.; Virginia Engineering Co., First Natl. Bk. Bldg., Newport News, Va.; MacDonald Engineering Co., 1 LaSalle St., Chicago; Theriault Contracting Co., 534 E. Johnson St., Philadelphia; Fiske-Carter Construction Co., 121½ W. Main St., Spartanburg, S. C.; Percy H. Keller, Shoreham Bldg., Washington, D. C.; R. M. Gordon, 440 S. Franklin St., Decatur, Ill.; R. K. Stewart & Son, High Point, N. C.; Spence Brothers, Brewer Arcade, Saginaw, Mich.; Barge-Thompson Co., 136 Elliott St., N. E., Atlanta; Rosen & Fischel, 11 S. LaSalle St., Chicago; Batson-Cook Co., West Point, Ga.; A. W. Kutsche & Co., 2111 Woodward Ave., Detroit; Worsham Brothers, Medical Arts Bldg., Knoxville, Tenn.; Columbia Engineering Co., Equitable Bldg., Baltimore; J. S. McCauley & Co., Bona Allen Bldg., Atlanta; James I. Barnes, Springfield, Ohio; Di Blasio Building Co., 3056 Tuscarawas St., Canton, Ohio; Ingalls Iron Works Co., 720 Fourth Ave., Birmingham, Ala.;

Elevators—Gurney Elevator Co., 109 W. 64th St., New York; S. Heller Elevator Co., Milwaukee, Wis.; Elevator Locks Co., 119 N. Washington St., Peoria, Ill.; Haughton Elevator & Machine Co., Vermont Bldg.; A. B. See Elevator Co., 1343 H St., N. W.; Otis Elevator Co., 810 18th St., N. W., all three Washington; Westinghouse Electric Elevator Co., 30th and Walnut Sts., Philadelphia; General Electric Co., Schenectady, N. Y.; American Elevator and Machinery Co., 500 E. Main St., Louisville, Ky.; Elevator Supplies Co., 1515 Willow Ave., Hoboken, N. J.; Graves Elevator Co., Box 56, Rochester, N. Y.; Atlantic Elevator Co., Erie Ave. and D St., Philadelphia, Pa.; Wm. A. Miller Elevator & Machine Co., 920 N. Main St., St. Louis, Mo.

Hospitals, Sanitoriums, Etc.

Ark., Benton—State, Gov. Harvey Parnell, reported, negotiating for \$350,000 Reconstruction Finance Corp. loan to complete heating and water systems at State Hospital for Nervous Diseases, near Benton.

Md., Buena Vista—District Commrs., Washington, D. C., have apparent low bid of \$86,984 from McCormick-Lanham Co., 40 E. Chestnut St., Philadelphia, Pa., for heating and laundry plant. 7-14

Md., Catonsville—Minter Homes Corp., Dundalk, submitted low bid of \$125,400 on infirmary, Spring Grove State Hospital, Dr. Robert E. Garrett, Supt.; Charles T. King, 1017 Cathedral St., Baltimore, low at \$20,390 on heating; Hughes Engineering & Construction Corp., 10 E. 21st St., Baltimore, low at \$18,488 on plumbing; George W. Walther Co., 712 N. Howard St., Baltimore, low at \$15,912 on electrical work; Paul J. Vincent Co., 3807 Beach Ave., Baltimore, low on item 2, refrigerating plant; Chatard & Norris, 218 Water St., Baltimore, low at \$2345 on item 1, refrigeration plant; Hutchinson Brothers, 5 S. Howard St., Baltimore, low at \$5500 on kitchen equipment; Henry Powell Hopkins, Archt., 10 E. Mulberry St., Baltimore. 7-21

Md., Perry Point—Veterans Administration, Washington, has low bid from Pennsylvania Engineering Co., 1119 N. Howard St., Philadelphia, Pa., for refrigeration plant.

Tex., Sanatorium—John Becker preparing plans for \$10,000 pavilion for State Sanatorium; also plan \$15,000 laundry and improvements doubling filter plant capacity.

W. Va., Huntington—Veterans Administration allotted \$10,000 for construction of recreational building at Veterans Hospital in Wayne County; probably ask bids in fall; brick.

Hotels and Apartments

D. C., Washington—American Security & Trust Co., 15th and Pa. Ave., N. W., construct addition to apartment at 3133 Connecticut Ave., N. W.; 8 stories, brick and conc.; cost \$18,000.

Fla., Panama City—W. W. Mosely construct 2-story business building on Harrison Ave.

Md., Baltimore—E. W. Brewington, 2606 Talbott Rd., remodeling dwelling 2332 Eutaw Place, into apartment house, 3 suites; brick;

3-stories; Morris Zimlin, Archt., 114 East St. Mo., St. Louis—Ainegue Realty Co., erecting duplex apartment N. W. Cor. York Drive and Glen Ridge Ave., Blue Ridge Terrace; Wm. P. McMahon, Archt., Buder Bldg.

Miscellaneous

Ky., Hickman—Hickman Hunting and Fishing Club, Alex Stone, Pres., rebuild burned club house at Grassy Point on Reelfoot Lake.

La., Shreveport—H. G. Hodges, City Bank Bldg., has contract at \$23,998, for constructing 3 story, brick and fireproof building, 710 Crockett St., for Salvation Army; Seymour Van Os, Archt., 720 Slattery Bldg., Shreveport; building will have rein. conc. found., built-up comp. roof, steel sash, steel and iron work, millwork, hardwood floors, plumbing, heating.

Va., Newport News—Huntington Mariners' Museum erect \$100,000 hydraulic testing laboratory and small model testing plant to be operated in conjunction with museum; 60 x 35 ft.; 3 stories; work under way involves clearing grounds, laying roads, etc.

Schools

D. C., Washington—District Commrs. have low bid of \$10,270 from James Parreco & Son, 2600 Rhode Island Ave., N. E., for school building, Industrial Home, Blue Plains. 6-21

Ga., Atlanta—Fulton County Board of Education, Jere Wells, Supt., has low bid from Norwood Griffin, 847 Boulevard Circle, for Humphries school; R. Kennon Perry, Archt., Mortgage Guarantee Bldg.

Ga., Atlanta—Fulton County Board of Education, Jere Wells, Supt., selected P. Thornton Marye, 62 Bartow St., N. W., architect for

Longino School—In College Park; 2 room addition, brick veneer and comp. roof;

Ben Hill High School—2 room and cafeteria addition; brick veneer, comp. roof.

Ga., Atlanta—Fulton County Board of Education, Jere Wells, Supt., have plans about ready by Arthur Neal Robinson, Henry Grady Bldg., for \$12,500 Milton school; 7 classrooms, 1 story, conc. foundations, brick veneer walls, comp. roof, wood floors.

Ga., Dry Branch—State Dept. of Education, Atlanta, plans \$11,000 school; 1 story, 6 classrooms and auditorium, conc. foundations, brick veneer walls, comp. roof.

Ga., Hogansville—City opens bids Aug. 4 for high school; 1 story and basement, 150 x 56 ft., conc. foundations, brick walls, comp. roof, wood floors; 9 classrooms; Wm. J. Chase, Archt., 140 Peachtree St., Atlanta.

Ga., Vienna—State Dept. of Education, Atlanta, plans 1-story school; 5 classrooms and auditorium.

Ga., Winterville—State Dept. of Education, Atlanta, plans 1-story, 6-classroom school; frame, comp. roof.

La., Hammond—Southeastern Louisiana College, Dr. L. A. Sims, Pres., appointed Weiss, Dreyfous & Seiferth, Maison Blanche Bldg., New Orleans, as architects to design 2-story, brick fireproof administration and classroom building, and temporary frame gymnasium and auditorium; 70x100 ft.; \$100,000 available.

Md., Baltimore—Public Improvement Comsn., H. J. Leimbach, Supvg. Engr., has low bid of \$16,962 from L. J. McCourt, 861 Greenmount Ave., for playground at School 122.

Md., Baltimore—Public Improvement Comsn., H. J. Leimbach, Supvg. Engr., has low bid of \$243,800 from P. C. Streett Engineering Co., 404 St. Paul St., for school for handicapped negro children, Franklin and Schroeder Sts.; Wm. F. Stone, Jr., Archt., 2612 N. Charles St.; Henry Adams, Mech. Engr., Calvert Bldg.; Van R. P. Saxe, Struct. Engr., Knickerbocker Bldg. 7-14

N. C., Guilford—Guilford College indefinitely postponed erection of administration and class buildings; A. Busselle, Archt., 347 Madison Ave., New York. 7-14

S. C., Anderson—Trustees of Glenn Street School erect auditorium.

Tenn., Donelson—Davidson County Board of Education, Nashville, have plans ready about Aug. 1 for \$10,000 gymnasium at Donelson High School; brick walls, wood floor, steel trusses, 62x100 ft., 1 story, built-up roof, conc. foundation; O. J. Billis, Archt., 65 Arcade, Nashville, Tenn. 7-14

Tenn., Knoxville—Board of Trustees, University of Tennessee, approved plans for \$200,000 biology building; \$150,000 remodeling old library for administrative purposes; \$20,000 for tower at new library to house Audigier art collection.

Tenn., Memphis—Board of Trustees, University of Tennessee, approved plans for \$50,000 connection between medical college buildings.

Tenn., Nashville—Tennessee State Board of Education indefinitely postponed plans for administration building, Tennessee Agricultural and Industrial State College; brick and conc., steel, 3 stories, 600,000 cu. ft.; terrazzo, tile, wood floors, slate built-up roof, conc. foundation; \$135,000; Tisdale and Pinson, Archts., 1016 Independent Life Bldg. 6-30

Tex., College Station—Board of Directors, S. G. Bailey, Sec., Texas Agricultural and Mechanical College, opens bids Aug. 20 for following:

Administration Building—rein. conc., brick, steel and stone trim

Animal Industries Building—3-story, rein. conc., brick, steel and stone trim; \$250,000

Veterinary Science Hospital—rein. conc., brick, steel and stone

Curbs, Gutters, Street Paving

Concrete Tunnels, Welded Pipe Lines, Small Structures

Plans by Prof. F. E. Giesecke; W. Wiprech, Bus. Mgr.

Tex., Longview—Spring Hill Common School District No. 12 have plans about completed by Strange & Zimmerman, First Nat. Bk. Bldg., for \$30,000 school; 1 story, rein. conc. and brick.

Va., Parksley—Accomac County Supt. of Schools opens bids Aug. 5 for \$25,000 school; 2 stories, brick; 8 classrooms, clinic, principal's office.

Stores

Ark., Blytheville—Farris Simon will rebuild Smith-Simon building; cost \$15,000.

Fla., Jacksonville—Eastman Kodak Stores, Inc., Florida subsidiary of Eastman Kodak Co., Rochester, N. Y., acquired building 127 W. Adams St.; expend \$20,000 for improvements.

Ga., Augusta—Green Furniture Co., W. S. Green, 1208 Broad St., erect building to replace Culpepper Bldg., 1019 Broad St.; 2 stories; 34x144 ft.; with warehouse 34x50 ft.; brick and steel; fireproof; cost \$12,000.

La., New Orleans—Sam H. Haddad has site, Louisiana Ave. and LaSalle St., erect drug store; will receive bids soon.

Mo., St. Louis—Trade Realty & Building Co., 111 N. 7th St., let contract to N. B. Hammond, International Office Bldg., for 6 store and loft buildings, 121-29 Market St.

Tex., Dallas—Great Atlantic and Pacific Tea Co., erect store 70x20 ft. Jefferson and Beckley Sts.; cost \$16,000.

Tex., Dallas—L. L. Fechenbach & Fromberg, 107 E. Jefferson St., erect store; 1 story, brick.

Tex., Longview—P. A. Griffin erect combination store and filling station, S. Green St.

Commerce St., Montgomery; glazed brick for interior, Cambria Clay Products Co., Blackfork, Ohio; marble work, plastering, paint, floor coverings, etc. not yet disposed of; struc. steel has been erected, conc. poured through fourth floor slab; setting of granite and limestone for exterior is above first floor. 5-5

Ga., Atlanta—Great Lakes Construction Co., 333 N. Michigan Ave., Chicago, Ill., general contractor for post office, Hunter, Spring and Forsyth streets, let contract to Georgia Marble Co., Tate, for 30,000 cubic feet of Georgia marble, involving approximately \$150,000. 7-7

Ga., Savannah—Treasury Department, Washington, D. C. let contract at \$12,988 to John M. Geary Co., Arcade Bldg., Asheville, N. C., to remodel and extend post office.

La., Barksdale Field, Shreveport—Constructing Quartermaster let contract at \$29,500 to L. C. Maples Construction Co., Shreveport, for garages. 7-14

La., New Orleans—Department of Justice, Bureau of Prisons, let contract to Texas Automatic Sprinkler System Co., Dallas, Texas, for sprinkler system at Federal Jail.

N. C., High Point—Spence Brothers, Saginaw, Mich., Gen. Contr. for \$234,800 post office, on which foundation walls and first floor slab have been poured and framing for second floor started, let following additional subcontracts: Marble work, Gray Knox Marble Co., Sutherland Ave., Knoxville, Tenn.; terrazzo, Flint Tile Mosaic Co., Flint, Mich.; painting, Douglas Dunn Co., Bay City, Mich.; common brick, Cunningham Brick Co., Thomasville, N. C.; building tile, Pine Hall Brick & Tile Co., Winston-Salem, N. C. 6-30

Hospitals, Sanitoriums, Etc.

Ark., Fayetteville—Veterans Administration, J. Ernest Price, Chief, Administration Division, Construction Service, let contract at \$533,500 to M. E. Gillioz, Monett, Mo., for general construction of buildings and utilities at Veterans Administration Hospital. 6-30

D. C., Washington—Department of Interior let contract to Otis Elevator Co., 810 18th St., N. W., at \$17,080, for elevator for male receiving building; to York Ice Machinery Co., Philadelphia, Pa., at about \$600 for refrigerating equipment.

Ga., Augusta—Veterans Administration, Washington, let contract at \$15,000 to Hilliard Heating & Plumbing Co., Forsyth Bldg., Atlanta, for boiler and fueling equipment, Veterans Hospital. 6-16

Md., Baltimore—City let contract to Enterprise Electric Co., 4 W. Barre St., for alterations to electrical system, City Hospitals; \$7498. 7-21

Miscellaneous

Fla., St. Petersburg—John H. Bull, Inc., Equitable Bldg., has contract for erecting addition to clubhouse for St. Petersburg Shuffle Board Club; Hadley & Nordstrom, 356 Central Ave. 7-7

Ga., Atlanta—Mr. Hudson, 15 Gilmer St., erect produce shed Gilmer and Courtland Sts., 1-story; 14x96 ft.; conc. found.; struc. steel; frame; galvanized siding and roofing; probably steel sash; owner builds.

Schools

Ark., Clarksville—Reuter Organ Co., Lawrence, Kan., has contract for organ for Munger Memorial Chapel on which roof girders are soon to be placed; J. W. Lewis, plumbing contr.; elec. installation by Clyde Grigsby; Albert O. Clarke, Archt., Rogers. 2-18

D. C., Washington—Department of Interior let contract to Goode Construction Co., Annapolis, Md., and 11½ E. Fifth St., Charlotte, N. C., for rein. conc. tunnel, piping, and cable system, for distribution of heat, light and power, at Howard University. 6-30

D. C., Washington—Department of Interior let contract at \$140,000 to Bahen & Wright, 916 Rhode Island Ave., N. E., for grading, road work, masonry, planting, wrought-iron work, installation of lawn

BUILDING CONTRACTS AWARDED

Churches

Ga., Atlanta—Gilbert Beers, Archt., Bona Allen Bldg., has contract for repairs to St. Lukes Church, 435 Peachtree St., N. E.

City and County

Fla., Clearwater—John Philloppoff erecting civic center building on fill south of causeway on Cleveland St. to replace burned structure; cost \$20,000; Roy Wakeling, Theodore Skinner and Daniel Kearns, Archts.

Dwellings

D. C., Washington—T. B. Greenstreet, 1246 Hamlin St., N. E., erect dwelling, 4630 Davenport St.; 2 stories, brick slate roof, steam or hot water heat; Wm. Harris, 1741 R. I. Ave., designer.

D. C., Washington—J. H. Lee, 69 P St., let contract to Wm. Angelelli, 518 Third St., N. E., to erect dwelling; 2 stories, brick, tin roof; R. E. Vaughan, Archt., 506 First St., N. W.

D. C., Washington—L. E. Breuninger & Sons, Inc., Investment Bldg., erect 2-story brick dwelling, 7705 Morningside Drive, N. W.; cost \$9000.

D. C., Washington—E. C. Licarone, 1002 11th St., erect dwelling, 2600 36th St.; 2 stories, brick and stone, slate and copper roof, hot water heat; owner builds; H. A. Brandt, Archt., 5213 13th St.

D. C., Washington—R. C. Abell, 3335 6th St., S. E., let contract to Maurice Joyce, 132 Upsal St., for residence, 3331 6th St., S. E.; 2 stories, brick and cinder block, comp. shingle roof.

Fla., Miami Beach—J. C. Gaffney Co., 933 Lincoln Rd., has contract for guest house and lodge 3525 Flamingo Drive, for W. J. McMurry, 52 Vanderbilt Ave., New York City; Russell T. Pancoast, Archt., 1139 Lincoln Rd., Miami Beach; cost \$13,680.

Fla., Miami Beach—Palmetto Homes Corp., John B. Reid, 12th St., let contract to H. H. Sayle, 110 Collins Ave., to erect number of

residences; C. B. Schoeppl, Archt., 528 Lincoln Rd. 7-21

Ga., Atlanta—E. S. Summers, 850 Marion Ave., S. E., has plans by W. W. Griffin, Jr., Archt., 452 Spring St., N. W., to erect residence Peachtree Way; 2 stories and basement; conc. found.; brick veneer walls; comp. roof; hardwood and tile floors; steam heat; day labor.

Md., Baltimore—August Di Domenico & Son, 2514 Harford Rd., have contract for dwelling 517 Nottingham Rd., for F. J. Seifert, 3300 Alto Rd.

Md., Baltimore—Frank Macey, 5001 Midwood Ave., erect 2-story, 38x27 ft. dwelling 304 Dunstan's Road and garage, 19x18 ft., slate roof, hot water heat; Machen & Dixon, Archts., 312 N. Charles St.; owner builds.

Tex., Longview—M. Tracy Flanagan, erecting dwelling on Turners Lane, Nugget Hill; 120 ft. long; 3 tiled bathrooms; garage attached; Spanish architecture; P. E. Zimmerman, Archts. in charge; cost \$25,000. 7-7

Va., Norfolk—J. L. Abblitt, Bd. of Trade Bldg., has contract at \$11,945 to erect residence; 38x25 ft., 2 stories and basement, hardwood floors, conc. found., slate roof. 7-21

Government and State

Ala., Montgomery—Algernon Blair, Gen. Contr., for post office now 25 per cent completed, let following additional subcontracts: Misc. and orna. iron, Roanoke Iron Works, Inc., 321 Third Ave., S. E., Roanoke, Va.; carving orna. granite work, Dixie Marble & Granite Co., Decatur, Ga.; vault doors, Herring-Hall-Marvin Safe Co., Hamilton, Ohio, through Thrasher Safe Co., 2 Coosa St., Montgomery; lath and channels, Penn Metals Co., Parkersburg, W. Va.; glass and glazing, Pittsburgh Plate Glass Co., Pittsburgh, Pa., through Birmingham office, 2901 Second Ave., N.; orna. bronze work, Herzog Iron Works, St. Paul, Minn.; hollow metal work, E. F. Hauserman Co., 6800 Grant Ave., Cleveland, Ohio; hollow building tile, Jenkins Brick Co., Montgomery, Ala.; exterior face brick, West Virginia Brick Co., through R. A. Jones, 28½

sprinkler system, etc., at Howard University. 6-2

Fla., Jacksonville—Duval County Board of Public Instruction let contract to S. S. Jacobs Co., Hildebrandt Bldg., for classroom and cafeteria building, Davis Ave. School; to J. B. Cox for 4-room addition, Landon High School.

Ga., Fitzgerald—Board of Education let contract to McCowen Brothers, Fitzgerald, for Ashton School; 1 story and basement, 10 classrooms, conc. foundations, brick veneer walls, frame construction, comp. roof.

La., Spencer—Union Parish School Board, P. L. Read, Sec., Farmerville, let contract to C. E. Andrews, Ruston, for school.

Md., Laurel—District Commrs., Washington, D. C., let contract at \$74,500 to Catalano Construction Co., Eldorado and Haddon Aves., Baltimore, for infirmary ward at D. C. Training School; A. L. Harris, Municipal Archt., Washington. 7-14

Miss., Golster—Oxford Consolidated School Dist. let contract to Charles E. and Clarence Campbell, Meadville, for rebuilding Oxford Consolidated School.

N. C., Wingate—Wingate Junior College erecting administration building, replacing burned structure.

Okla., Platter—Renshaw & Nilms to erect school; 6 classrooms, auditorium, gymnasium, library and office.

Tex., College Station—Henger & Chambers Co., 1600 Dallas Bk. & Tr. Bldg., Dallas, Tex., Gen. Contr. for petroleum engineering, geology and Texas engineering experiment station building at Texas A. & M. College, let following subcontracts: Rein. and struc. steel, and orna. iron, Alamo Iron Works, 130 Santa Clara St.; Enduro roof deck, R. A. Laidlaw Co.; plastering and lathing, D. A. Condon, 402 Cornell St.; F. Redondo & Co., 1138 N. Flores St.; all San Antonio; roofing and sheet metal, C. H. Ruebeck Co., 218 S. 11th St., Waco; millwork, Martin-Wilder Co., Banks & Shepherd Dr.; steel casements, Everett Building Products Co., 3118 Harrisburg; metal bucks and trim, Coastal Sales Agency, 3914 Main St.; terrazzo, International Tile Co., 1420 McKinney St.; all Houston; metal doors and misc. iron and steel, R. J. DeWees Co., 3015 Grand St.; linoleum, Hartman-Jones Co.; acousti-

cal treatment, S. W. Nichols Co., 209 Exposition St.; marble, Vermont Marble Co., 1513 Wall St.; glass and glazing, Pittsburgh Plate Glass Co., Santa Fe Bldg.; Venetian blinds, Consolidated Venetian Blind Co., 2405 S. Harwood St.; plumbing, heating and ventilating, Martyn Brothers, Inc., 911 Camp St.; all Dallas; building to be 186 x 127 ft., 4 stories with center tower; struc. frame, rein. conc. and struc. steel; outside walls, cast stone, face brick with hollow tile backing; terrazzo, marble and colored cement floors; lath and plaster partitions; stair hall walls of glazed tile; plans by F. E. Giesecke, College archt. 7-21

Tex., Galveston—School Board let following contracts for equipment for Livenberg Junior High School: Cafeteria equipment, Ben Blum & Co., \$3428; shop equipment, Black Hardware Co., \$1938, and Ben Blum & Co., \$732; gymnasium equipment, Black Hardware Co., \$1533; classroom seats, Oscar Springer, \$7809, and Kauffman-Myers & Co., \$265; art, science and library equipment, Oscar Springer, \$567; stage equipment, Kahn & Levy, \$692; auditorium seats, Black Hardware Co., \$3513; clinic equipment, Kauffman-Myers & Co.; window shades, Kauffman-Myers & Co., \$777; venetian blinds, McBride's \$840; lockers, Kauffman-Myers & Co., \$3509. 6-2

Stores

D. C., Washington—LaRose Cont. Co., 501 Lexington Ave., New York, has contract for store, 1303 F St., for Julius Garfinckel, 14th and F Sts.; 2 stories, brick, tin roof, hot water heat; Julius Wenig, Edmonds Bldg., Archt.

D. C., Washington—J. B. Stein, 482 Indiana Ave., N. W., Joseph Levy, erect 1 story brick store, 1711 Rhode Island Ave., N. E.; cost \$11,000.

D. C., Washington—Joseph D. Gatti, 4200 16th St., N. W., erect 2½ story brick and cinder block stores, 318-22 Kennedy St., N. W.

La., New Orleans—Gumbel Estate let contract to Reimann Construction Co., for repairs to store building, 517-525 Canal St., recently damaged by fire; Moise H. Goldstein, Archt., American Bk. Bldg.

La., New Orleans—J. A. Haase, Jr., 916

Union St., has contract for converting former 3-story Trianon Theater Bldg., 814 Union St., into store building; Henry Spang, 5105 Pitt St., has contract for sprinkler system; will let contract later for plumbing, electric wiring, air conditioning, etc.; Favrot & Livaudais, Archts., Nola Bldg.

W. Va., Bluefield—Boone, Eason & Wood, Bluefield, have contract for conc. masonry, struc. steel and carpentry work on new building for S. G. Kresge Co., Detroit, Mich., as well as contract for dismantling buildings Cor. Federal St. and McCulloch Ave.; sub let contract for excavation to Lilly Bros.; Burgess Electric Co., for wiring and electric appliances; Hendricks Heating and Plumbing Co., plumbing; O. V. Hefner, for roofing and sheet metal; J. F. Blunt, tiling; Nixon Painting and Paper Co., painting; A. H. Greever, plastering. 7-14

Theatres

Ga., Atlanta—James McWilliams, Inc., 19 East 47th St., New York, general contractor, for Loew's Grand Theater project, 113 Pryor St., advises that at present time are erecting steel. Following sub-contracts let: Structural steel, Ingalls Iron Works, 117 Liberty St.; metal covered work and fire doors, Richmond Fireproof Door Co., 1 E. 42nd St.; hollow metal, Art Metal Construction Co., 369 Broadway; miscellaneous iron, Builders Iron Works, 615 Tiffany St.; millwork, Jacob Froehlich Cabinet Works, Whitlock and Legget Ave.; heating and ventilating, Gillis & Geoghegan, Inc., 537 W. Broadway; aluminum and bronze, Greenpoint Brass & Bronze Co., 604 Lexington Ave.; lathing and plastering, F. L. Hewes Co., 245 W. 60th St.; electric, E-J Electric Installation Co., 227 E. 45th St.; hardware, Russell & Erwin Mfg. Co., 285 Madison Ave.; art glass, Richard N. Spiers & Sons, 50 W. 15th St.; roofing and sheet metal, Philip Carey Co., 60 E. 42nd St.; toilet partitions, The Mills Co., 11 W. 42nd St., all New York City; marble and tile, U. S. Mosaic Tile Co., Bona Allen Bldg.; plumbing and drainage, Farrell Heating & Plumbing Co., 248 Ivy St., N. E.; structural glass and glazing, The Warren Co., 905 Fair St., S. E.; demolition and shoring, Hudgins Contracting Co., all Atlanta; Thomas W. Lamb, Inc., Archt., 401 Grand Theater Bldg. 6-30

WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Machinery and Supplies

Electric Arc Welder.—Farquhar Machinery Co., L. J. Larzelere, Pres. and Treas., 720-28 W. Bay St., Jacksonville, Fla.—Wants prices and data on electric arc welder, 200 to 300 amperes, direct connected to motor; late model; shop truck wheels; first class condition.

Engine Generator Set.—G. W. Mathews, P. O. Box 1421, Orlando, Fla.—Wants prices and data on 75 to 100-kw., 3-phase, 60-cycle generator, direct connected to steam or Diesel engine; state condition and manufacturer's name.

Engine (Diesel or Steam).—See Engine Generator Set.

Pulverizer.—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants prices and data on small portable pulverizer, with elevator; No. 3 Jeffrey preferred.

Roofing and Shingle Making Machinery.—D. E. Piper, Fort Lauderdale, Fla.—Wants prices and data on new and second hand machinery for manufacturing of roofing and composition shingles.

Tank and Tower.—P. O. Box 462, Mobile, Ala.—Wants prices and data on 100,000-gal. water tank on 100-ft. tower, delivered Mobile.

Tower Hoist.—Phillips Machinery Co., (Contractors Equipment), 9th and Cary Sts., Richmond, Va.—Wants prices and data on single drum conc. tower hoist, 60 to 80 h. p.

Miscellaneous

Boot Black Stands, Hat Blocks.—John F. Castano, Box 338, Fort Myers, Fla.—Wants prices and data on boot black stands and hat blocks.

Felt, Roofing Materials, Supplies and Accessories.—D. E. Piper, Fort Lauderdale, Fla.—Wants prices and data from producers of felt and other materials used in manufacture of roofing, and roofing supplies and accessories.

Glass Bottles.—W. L. Tiller, Lebanon, Tenn.—Wants prices and data on glass bottles of pint and half pint size.

Pasteboard Containers.—Standard Supply Co., W. H. Sawson, Jr., Sales Mgr., Box 37,

Asheville, N. C.—Wants prices and samples of pasteboard containers with capacity for five lb. talcum powder; also pasteboard containers with shaker tops, with one pound capacity.

Wind Mill, Cypress Tank.—Burwell Tie Co., Stovall, N. C.—Wants prices and data on wind mill, cypress tank, for residence water supply.

Phillips Machinery Co., (Contractors Equipment), 9th and Cary Sts., Richmond, Va.—Wants prices and data on following used equipment:

Shores—200 to 400, Roos;

Column Clamps—200, Roos, adjustable from 18 to 36 inches;

Tubular Towers—Dravo, heavy duty type, single and double cages.

Bids Asked

Boiler.—Supt., Pipestone Indian School, Pipestone, Minn.—Bids July 30 for high pressure horizontal tubular boiler.

Boilers (Steam Heating).—City of High Point, N. C., E. M. Knox, City Manager.—

Bids Aug. 3 for furnishing new steel boiler and removing old boilers; S. H. Strickland, Director of Public Works.

Boilers.—City of High Point, N. C., Dr. C. S. Grayson, Mayor—Bids Aug. 3 for replacement of steam heating boilers in basement of City Hall, furnishing new steel boiler; removing old boilers, equipment and labor, etc.

Brass.—U. S. Army, Ordnance, Dept., Commanding Officer, Watervliet Arsenal, N. Y.—Bids Aug. 2 for 36 pieces of naval brass; Cir. 2.

Cast Stone.—Quartermaster, U. S. Marine Corps, Washington, D. C.—Bids Aug. 5 for cast stone for copings and window sills, Sch. 52.

Chain.—U. S. Engineer Office, First District, New York, N. Y.—Bids July 28 for 2 shots 15 fathoms each anchor chain, 2 anchor chain shackles and 40 ft. B.B. chain; Cir. 22.

Chinaware.—Veterans Administration, Procurement Division, Washington, D. C.—Bids Aug. 9 for 36,000 bowls, 3000 creams, 29,400 bakers, 12,000 fruit dishes, 3600 platters, 24,000 dinner plates, 8400 pie plates, 12,000 bread and butter plates, 18,000 tea cups, 14,000 individual butters; Pro. G-1.

Concrete Posts.—Post Office Dept., Purchasing Agent, Washington, D. C.—Bids Aug. 8 for 2600 long and 200 short conc. letter box posts.

Covered Walks.—Custodian, U. S. Marine Hospital, Carville, La.—Bids Aug. 5 for covered walks.

Crescoted Timber Fenders.—U. S. Engineer Office, First New Orleans, District, Poland and Dauphine Sts., New Orleans, La.—Bids Aug. 17 for 540 lin. ft. crescoted timber fenders for Texas and New Orleans Railroad Company's Bayou Sale branch bridge.

Deep Wells.—Veterans Administration, Construction Service, 764 Arlington Bldg., Washington, D. C.—Bids Aug. 16 for drilling, testing and furnishing complete deep wells, Veterans Administration Hospital, Bedford, Mass.

Dredging.—U. S. Engineer Office, Providence, R. I.—Bids Aug. 12 for 105,000 cu. yd. dredging, Pawcatuck River, Rhode Island and Connecticut.

Dredging.—U. S. Engineer Office, Boston, Mass.—Bids Aug. 5 for 11,444 cu. yd. dredging in Cape Cod Canal.

Dredging.—U. S. Engineer Office, Wilmington, Del.—Bids Aug. 5 for 123,300 cu. yd. dredging, Maurice River Cove, N. J.

Gabardine.—U. S. Army, Quartermaster Depot, 21st and Johnston Sts., Philadelphia, Pa.—Bids Aug. 8 for 1000 yd. 56-58-in. slate blue gabardine cloth.

Gasoline.—Panama Canal, General Purchasing Officer, Washington, D. C.—Bids Aug. 3 for bulk motor-grade gasoline.

Gasoline, Kerosene, Oil, Grease.—State Board of Control, Austin, Tex.—Bids Aug. 9 for 5,000,000 gal. gasoline, 100,000 gal. kerosene, 200,000 gal. lubricating oil, 200,000 lb. mineral lubricating greases and 20,000 lb. transmission oil, for State Highway and other state departments and eleemosynary institutions.

Grader Blades.—State Highway Dept., E. D. Kenna, Director, Jackson, Miss.—Bids Aug. 9 for one or two carloads of grader blades, f. o. b. Jackson, Miss.

Heating Plant.—Bd. of Supervisors, Forrest County, Hattiesburg, Miss.—Bids Aug. 4 for correcting and re-conditioning heating system in courthouse; Ethel Baylis, Chancery Clk.

Hydrants.—District Commrs., 320 District Bldg., Washington, D. C.—Bids Aug. 8 for 200 fire hydrants.

License Plates.—Mississippi License Tag Comsn., State Auditor's Office, Jackson, Miss.—Bids Aug. 5 for 1933 license plates.

Office Building Alterations.—City of Baltimore, Md., W. A. Parr, Building Engineer.—Bids Aug. 3 for alterations to office of Bureau of Building.

Painting.—Navy Dept., Bureau of Yards and Docks, Washington, D. C.—Bids Aug. 10 for painting 2 steel radio towers, Naval

Academy, Annapolis, Md., Spec. 6948; 2 steel radio towers, Naval Radio Station, Arlington, Va., Spec. 6950; 2 steel radio towers, Naval Radio Station, New Orleans, La., spec. 6951.

Plaster Models.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids Aug. 26 for plaster models of National Institute of Health and Department of Agriculture buildings.

Post Office.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids Aug. 24 for construction, except elevator and dumbwaiter, of post office, Oak Park, Ill.

Refrigerators (Mechanical).—Commanding Officer, Washington Quartermaster Depot, 20th and C Sts., N. W., Washington, D. C.—Bids Aug. 10 for mechanical refrigerators, Req. 950-6-33.

Riprap Stone.—U. S. Engineer Office, Box 97, Memphis, Tenn.—Bids Aug. 4 for riprap stone spalls; No. 0-33-17.

Road Graders (Maintenance).—Forrest County Board of Supervisors, Ethel Baylis, Chancery Clerk, Hattiesburg, Miss.—Bids Aug. 11 for two small road maintenance graders, not exceeding 4500 lb. in weight, with leaning wheels and solid rubber tires.

Sewer Construction.—Houston, Tex.—See Construction News—Sewers.

Steel.—U. S. Army, Quartermaster Corps, Contracting Officer, Jeffersonville, Ind.—Bids Aug. 3 for 6100 sheets black steel.

Tank (Steel).—Navy Dept., Bureau of Yards and Docks, Washington, D. C.—Bids Aug. 10 for 740,000-gal. steel tank for Mare Island Navy Yard, Spec. 6857.

Tumblers.—Veterans Administration, Procurement Division, Washington, D. C.—Bids Aug. 8 for 129,312 tumblers.

Water Softening System.—Veterans Administration, Construction Service, 764 Arlington Bldg., Washington, D. C.—Bids Aug. 16 for Zeolite water softening system, Waukesha, Milwaukee, Wis.

Supt., Pipestone Indian School, Pipestone, Minn.—Bids Aug. 3 for following:

Brick, Cement, Clay.—12,000 common brick, 4500 fire brick, 60 sacks cement, 60 sacks bricklayer's cement, 600 lb. fire clay

Water Softening Equipment.

AIR CORPS. Office of Contracting Officer, Material Division, Wright Field, Dayton, Ohio.—Bids on indicated dates for following:

Engine heaters, type A-2 heater flanges, type A-2 heater tees.—200 each, Aug. 3, Cir. 10

Propeller Hub Assemblies.—304, Aug. 15, Cir. 12

Radio fixed antenna, radio antenna supports, radio mounting brackets, radio mounting base bracket assemblies, radio tuning unit Clamps.—230 each, Aug. 8, Cir. 13.

DEPARTMENT OF AGRICULTURE, Division of Purchases, Sales and Traffic, Washington, D. C.—Bids on indicated dates for following:

Step Printers.—for Washington, Aug. 2, Pro. 3275

Paper Lanterns (Miniature).—for Washington, Aug. 2, Pro. 3284

Motor Patrol Grater (Tandem Driven).—Aug. 2, Pro. 3273

Special Flexible Wax Stencil Paper.—10 reams, for Washington, Aug. 2, Pro. 3286

PURCHASING DIVISION, STATE BOARD OF CONTROL, John F. Wallace, Austin, Tex.—Bids Aug. 10 for following:

Aluminum ware, automobile replacement parts, batteries, storage for cars, brushes, dusters and mops, dishes, drug sundries, dry goods, notions and men's and boys' furnishings, dynamite, electrical supplies, enameled steel ware, fresh and cured meats and butterine, flour, fuel, coal and lignite, glassware, groceries, hardware, tools, etc., harness, etc., kitchen utensils and table cutlery, laundry supplies, leather and shoe findings, oils, lubrication, paints, plumbing, steam heat, pipe and pipe fittings, power plant supplies, porcelain, school books and kindergarten supplies.

NAVY DEPARTMENT, Bureau of Sup-

plies and Accounts, Washington, D. C.—Bids for following on various dates, delivery as indicated:

Ventilating Fans.—Aug. 2, Philadelphia, Sch. 8443;

Fire Engine (Motor Driven).—Aug. 9, 8411;

Loofa Fiber Sponges.—53,900, Aug. 9, Mare Island, Sch. 8409;

Pneumatic Sealing Hammers.—60, Aug. 9, Mare Island, Sch. 8410;

Insulating Varnish.—Aug. 9, various east and west coast points, Sch. 8408;

Engine Lathes (Motor Driven).—Aug. 9, Mare Island, Sch. 8412;

Red Lead (Dry).—Aug. 9, various east and west coast points, Sch. 8414;

Zinc-Oxide and Dust.—Aug. 9, Norfolk and Mare Island, Sch. 8415;

Gate Valves.—Aug. 16, various east and west coast points, Sch. 8413;

Steel Tubing.—Aug. 2, Norfolk, Sch. 8429

Cable (Insulated).—Aug. 2, Norfolk, Sch. 8427

Wading Suits (Waterproof).—275, Aug. 9, Philadelphia, Sch. 8390

Bronze and Aluminum Powder.—Aug. 9, various east and west coast points, Sch. 8419

Lacquer (Varnish, Spar, Water-Resisting, Interior and Aluminum).—various east and west coast points, Sch. 8417

Shear (Bench, Motor-Driven).—Aug. 9, New York or San Francisco, Sch. 8423

Arbor Press.—Aug. 9, New York or San Francisco, Sch. 8424

Ventilating Fans, Controllers and Spare Parts.—Aug. 9, various east and west coast points, Sch. 8428

Vacuum Tubes.—30, Aug. 9, Mare Island, Sch. 8426

Hydraulic Hoist (Motor-Operated, Portable).—Aug. 2, Sewall's Point, Va., Sch. 8432

Sounding Machines and Spare Parts (Power Driven).—Aug. 9, Mare Island, Sch. 8438

Blueprint Machine (Motor-Driven).—Aug. 9, Boston, Sch. 8433

Snare Drums (Bass and Tenor).—Aug. 2, Philadelphia, Sch. 8436

Signals (Practice Bomb).—44,000, Aug. 16, Mare Island, Sch. 8435

Pneumatic Sandblast Room Equipment (Abrasive Elevating Type).—Aug. 23, Sewall's Point, Sch. 8441

Spotlights.—Aug. 16, various east and west coast points, Sch. 8437

Chrome, Lampblack, Litharge, Manganese Resinate, Dry Sienna, Silica, etc.—Aug. 16, various east and west coast points, Sch. 8442

Miniature Practice Bombs.—Aug. 16, Portsmouth and Mare Island, Sch. 8444

Water Hose (Wrapped).—13,200 ft., Aug. 16, Mare Island, Sch. 8447

Naval Brass (Rolled, Sheet).—6100 lb., Aug. 16, Mare Island.

Safety Treads.—2400, Aug. 9, Brooklyn, Sch. 8445;

Aluminum Chairs.—112, Aug. 9, Brooklyn, Sch. 8450;

Storage Battery Testing Outfits and Syringes (Hydrometer).—Aug. 9, Brooklyn, Sch. 8460

Shearing, Gap Splitting and Squaring Machine (Motor Driven).—Aug. 9, Brooklyn, Sch. 8446

Boilers (Portable, Locomotive Type).—Aug. 9, Brooklyn, Sch. 8467

Precision Lathes (Tool Makers, Motor Driven).—2, Aug. 9, Portsmouth, Sch. 8452

Crane Truck.—Aug. 9, Sewall's Point, Sch. 8455

Centrifugal Blowers (Low Pressure, Motor Driven).—Aug. 9, Brooklyn, Sch. 8455

Chronometric Tachometers (Hand or portable).—Aug. 9, Brooklyn, Sch. 8464

Ester and Yacca Gum.—Aug. 9, Mare Island, Sch. 8476

Switchboard, including Transformers and Equipment (indoor cubicle type, steel enclosed).—Aug. 16, Philadelphia, Sch. 8434

Safety and Ladder Treads (Aluminum alloy and aluminum).—Aug. 16, various east and west coast points, Sch. 8425

Lump Rosin, Turpentine and Pine Oil.—Aug. 16, various east and west coast points, Sch. 8448

Ladder Treads (Aluminum alloy).—Aug.

16, Sewall's Points, Mare Island, Sch. 8454
Precision Lathe (Bench, motor driven)—Aug. 16, New York or San Francisco, Sch. 8449
Dishwashing Machines and Spares—Aug. 16, Brooklyn and Mare Island, Sch. 8456.

State Highway Dept., Ben M. Sawyer, Ch. Commr., Columbia, S. C.—Bids Aug. 3 for following:
Aggregate Oxygen and Acetylene Welding Case in Cylinders.

INDUSTRIAL NEWS

Timber and Sawmill Offered

J. W. Harman and W. K. Pritt, Parsons, W. Va., special receivers of Scheller Brothers Estate, will offer at public sale on August 13 at Parsons 1314 acres of timber land and band mill and equipment, including a short line railroad.

Sales Manager Locates at Tampa

J. H. Langston, who has been appointed sales manager in the state of Florida for the J. S. Schofield's Sons Company of Macon, Ga., has established headquarters at Tampa. His initial efforts in the state have resulted in some substantial business for his firm.

Austin-Western Distributing Cletrac Crawlers

The Austin-Western Road Machinery Company, Chicago, announces it is now distributing and servicing Cletrac Crawler Tractors through its facilities in the South and Southwest. Austin-Western offices located throughout this territory are equipped to give the best type of service to Cletrac users.

Keystone Driller Appointments

The Keystone Driller Company, Beaver Falls, Pa., announces the appointment of G. L. Harman as general sales manager. Until recently he was sales manager of the Industrial Brownhoist Corporation, Cleveland, Ohio. Lynn H. Ransom has been appointed chief engineer of the Keystone Driller Company, having served in the Engineering Department of that company since 1926.

Will Make City Audit

The annual audit of the city books of Birmingham, Ala., will be made this year by Andrews, Harden & Company, certified public accountants of Birmingham, with offices in the Jackson Building. This firm was organized a few months ago by John F. Andrews, formerly assistant manager of the Kaul Lumber Company, and James A. Harden, certified public accountant.

Awarded Big Utility Contract

As part of an electrical project calling for the expenditure of \$8,500,000 in the next two years, a contract of approximately \$1,750,000 has been awarded to the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., by the Philadelphia Electric Company for a 183,000 kv-a turbine generator to be installed at the Richmond generating plant on the Delaware River, Philadelphia.

Important Vault Installations

The Springfield Safe Deposit and Trust Company, Springfield, Mass., has commissioned the York Safe and Lock Company, York, Pa., to build the vaults to its new building at Springfield. The equipment, requiring three main entrances, represents one

of the most impressive vault installations in New England, it is said. York Safe and Lock Company is also installing a vault for the South Carolina National Bank, Charleston, S. C., while three other Southern banks are about to receive installations.

Trade Literature

Air-Conditioned Trains.—The Baltimore and Ohio Railroad Company has had compiled in permanent form a booklet of newspaper editorials and magazine articles on the First Air-Conditioned Railroad Trains, introduced by the Baltimore and Ohio last year.

Pulp Grinding Wheels.—The Carborundum Company, Niagara Falls, N. Y., is distributing a booklet on the Aloxite Brand Pulp Grinding Wheels, a product of that company developed for paper mill operations after exhaustive research.

American Foreign Trade.—In the form of a 203-page volume the National Foreign Trade Council, New York City, has issued a report on American Foreign Trade in 1932, the subject matter being an official report of the Nineteenth National Foreign Trade Convention and the Ninth Pacific Foreign Trade Convention, held at Honolulu, Hawaii, May 4-6.

Ryerson Journal and Stock List.—Joseph T. Ryerson & Son, Inc., Chicago, is distributing a new issue of the Ryerson Journal and Stock List, a handy reference book on steel. In addition, it presents descriptions, specifications, sizes, etc., and contains new extras on bands, new cold finished steel extras, new hot rolled cutting extras and other information.

Tung Oil.—The U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, has issued a bulletin on "Tung Oil—Economic and Commercial Factors in the Development of a Domestic Tung Oil Industry." The bulletin was released at this time in response to a growing demand from various sections of the country, particularly the South, for information on the tung oil situation.

Planning and Building Washington.—The Washington Society of Engineers, Washington, D. C., has issued a volume entitled "The Planning and Building of Washington." Presented with the descriptive data and illustrations of distinguished architects and engineers assisting in the development. It is published by Ransdell Incorporated, Washington, and is priced at \$3.00 for the Haynes Newell edition and \$2.00 for the standard edition.

Modern Business Building

As typical of the modern design now being employed in the construction of business buildings throughout the South and Southwest, the new Fourth Street Building recently completed in Winston-Salem, N. C., is a fine example. Incidentally, the structure is 100 per cent occupied.

It is of steel frame construction with J. & L. Junior floor and roof construction, the roof of poured gypsum topped with Barrett 20-year bonded roof. Exterior is faced with Indiana limestone on two street sides. The building is 140 by 90 feet and is equipped with two passenger elevators, a freight elevator and two sidewalk elevators, all installed by Otis Elevator Company. Heating is provided by a Warren Webster Hy-Lo Control system, with an Iron Fireman stoker. The building is said to have



Recently Completed at Winston-Salem

cost slightly less than 28 cents per cubic foot and has a fire insurance rate of 22 cents.

Harold Macklin was the architect, and the James Baird Company, general contractor, both of Winston-Salem. Other local contractors employed on the structure were: West End Plumbing & Heating Company, plumbing and heating; Ever-Ready Electric Company, electrical work, and the Warner Flooring Company, marble, tile and terrazzo.

TWO ADDITIONAL UNITS FOR BIG HEATING PLANT

Washington, D. C.—Contract awarded in March of this year to the Combustion Engineering Corporation, New York, for equipment to be installed in the Central Heating Plant being constructed here for heating new Government buildings in the Triangle area, covered four complete steam generating units and an option on two additional duplicate units. The Government has now exercised this option and awarded contract to the Combustion Engineering Corporation for the two additional units.

United Engineers and Contractors, Inc., Philadelphia, are engineers for the project.

Naval Stores Resources

The production of turpentine and rosin in the United States is confined to the South. It is a \$30,000,000 industry. In a discussion of the naval stores situation, Henry Mace Payne, executive assistant, United States Timber Conservation Board, shows that the producing states are North and South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas.

According to the last (15th) Census, Georgia produced 51 per cent and Florida 31 per cent of the total, in the season of 1929-30. (Advance data from forthcoming Gamble's "Naval Stores Year Book" gives Georgia 52 per cent and Florida 31 per cent for 1930-31.)

The saw timber stand in the Southeast may be divided as follows:

Total stand 199,297,000,000 bd. ft., or 11.9 per cent of the United States, of which 60.9 per cent or 121,449,000,000 bd. ft. are softwoods; and of these softwoods, 116,102,000,000 bd. ft., or 95.6 per cent are shortleaf and loblolly (non-gum-running) pine, and longleaf and slash pine (the two gum-running species from which naval stores are secured), all sold as "Southern Yellow Pine."

In terms of area, there remain in the Southeast 57,265,000 acres or 30.3 per cent of the total, which is saw timber area, but of which no separate figures as to species are available in terms of area, because they grow in mixed stands.

In general, the naval stores territory extends from Eastern North Carolina along the Atlantic and Gulf to timber line in Texas.

Quoting Dr. Austin Cary:

"Not all of this territory is timbered, or even capable of bearing pine timber, for areas of soil natural to other species of trees or of too poor a character to grow timber in commercial amounts are sprinkled through it, while lumbering and fires following have for the time being laid large areas waste. Actual resources in the form of virgin or second growth timber are in the aggregate large, however, and the possibilities of timber production under management are enormous. * * * Slash pine starts into the air at once, six inches of height being frequently attained before the advent of the winter following the seed fall, and on ground adapted to it, at six years of age is around 15 feet tall. Longleaf pine on the other hand at the same age has not usually started up from the ground; * * * but with this to show for the time consumed—a long, stout tap root.

* * * Later growth is more on an equality. * * * Two and a half to three feet yearly is the usual gain in height; fifty feet in total height is frequently reached in twenty years by slash and in twenty-five to thirty years by longleaf. At these ages, unless they are too small by reason of crowding, the trees are good turpentine timber."

It is a matter of record that men active in the production of naval stores in Georgia in 1900, made the statement that the forests were exhausted for gum production, and moved to Mississippi and Louisiana. Today their sons are back in Georgia, turpentineing the second growth in the forests their fathers deserted. Several tracts known to have been cultivated for corn in 1901, are now being actively turpentineed.

District Forester Coulter says that over the next ten years, there will be a decline in turpentine production, but that after ten years there will be so much second growth timber available that production can readily be maintained at normal capacity.

If the paper industry will work with the turpentine industry, both pulp requirements and naval stores requirements can be mutually beneficial.

There is little difference of opinion, therefore, as to assurance of adequate timber for turpentineing purposes in the Southeast, provided only that fire protection be maintained, and that turpentineing of trees below 9" D. B. H. be abandoned.

A long list of articles and publications descriptive of gum production may be found in bibliographies of the U. S. and various State Forest Services and the Department of Agriculture.

Notable among the more recent, in order of issuance, are:

"Good Naval Stores Practice," by Dr. Austin Cary, Leaflet No. 41, U. S. Department of Agriculture, May, 1929.

"Florida Naval Stores," by Lenthall Wyman, Bulletin No. 25, Florida Department of Agriculture, May, 1929.

"Timber Growing and Logging and Turpentineing Practices in the Southern Pine Region," by R. D. Forbes, Technical Bulletin No. 204, U. S. Department of Agriculture, October, 1930.

"Improvement in the Production of Oleoresin Through Lower Chipping," by Eloise Gerry, Technical Bulletin No. 262, U. S. Department of Agriculture, September, 1931.

"Experiments in Naval Stores Practice," by Lenthall Wyman, Technical Bulletin No. 298, U. S. Department of Agriculture.

Hardware Stores of Gulf Southwest

A number of significant facts pointing to the causes of success or failure among wholesale hardware dealers are brought out in a comparison of the operations of profitable and unprofitable concerns reported in the Commerce Department's recent market survey "Hardware Distribution in the Gulf Southwest."

The balance sheets and operating results of 89 wholesaling establishments with aggregate capital of \$79,000,000 and sales totaling \$145,000,000 were analyzed in the course of the government survey, to obtain the necessary data.

Of the 89 hardware wholesalers studied, 79, or approximately 8 out of 9, were money makers, the report reveals. Taken as a group, the successful hardware concerns maintained themselves in a more liquid condition than the others, it was found.

Of the five losing wholesale-type concerns, four had accounts receivable above the average, while in four also, inventories were unusually high. Too much money tied up in inventory and credit extended to customers was revealed in too low capital turnover, and more directly in low stock turn for all five establishments.

Turnover was found to be low in comparison to the profitable concerns on such important lines as tools, wire goods, builders' and shelf hardware, cutlery, sport goods, toys, stoves and ranges.

Among the less successful wholesale-retail establishments, three factors stand out as causes for closing the year in the red. All five of these concerns had accounts payable to manufacturers above the average, and all five were selling their hardware with lower than average gross margin. Three of the five also had a stock turn below the average for the money-makers in their class.

More than half of all retail hardware stores in the Gulf Southwest with sales in excess of \$60,000 annually are growing larger, while more than half of the stores with sales for less than this amount are experiencing a shrinking sales volume. Similarly over half of the profitable stores were growing, while more than two-thirds of the losing stores were shrinking in size from the standpoint of volume of sales.

A startling fact revealed by the survey was that it was not the new retail hardware store that was losing money, but the old one. Also, the survey developed the fact that much direct-mail advertising was wasted effort. The typical store threw away four pounds per week of incoming circular material from manufacturers, which was neither read nor saved for reference.

FINANCIAL NEWS

Bond Issues Proposed

Fla., Bunnell—Town Commrs. authorized issuance of \$92,000 waterworks refunding bonds.

Ga., Augusta—City planning \$54,000 bond issue.

La., Jonesboro—F. P. Clark & Co., Alexandria, has option through Jonesboro State Bank on \$62,000 6 per cent certificates of indebtedness.

La., Natchitoches—Natchitoches Parish Police Jury plans issuing \$68,000 6% certificates of indebtedness.

Miss., Indianola—Sunflower County opens bids Aug. 2 for \$40,000 refunding bonds.

Mo., Jefferson City—State of Missouri, Larry Brunk, Treas., opens bids on \$5,000,000 4½% road bonds.

S. C., Greenville—Greenville County considering sale of \$96,000 school bonds.

Tex., Brownsville—Cameron County Water Control and Improvement District No. 19 postponed election on \$950,000 bonds to Aug. 19.

Tex., Channing—Hartley County voted \$150,000 bonds; probably will not sell. 6-9

Tex., University Park, Dallas—City of University Park, Theo. E. Jones, 3800 University Blvd., votes Aug. 13 on \$25,000 bonds for purchase and improvement of park; 5½%, \$1000 denom.

W. Va., Charleston—State of West Virginia, Gov. William G. Conley, plans selling \$2,000,000 road bonds.

Bond Issues Sold

Ala., Birmingham—City Comsn. sold \$580,000 bonds to First National Bank and Birmingham Trust & Savings Co.; 6%; \$250,000 grade separation, 20th St. underpass; \$170,000 drainage, work done in Village and Valley creeks draining project; \$160,000 public improvement. 6-30

Miss., Meridian—Lauderdale County Bd. of Supvrs., Mack Cameron, Chancery Clk., sold \$6000 Long Creek School District bonds to W. R. Zachary, guardian for J. B. Watson.

Miss., Vicksburg—City, J. G. Sherard, Clerk, sold \$5000 5% loan warrant at par to First National Bank & Trust Co.

New Financial Corporations

Ala., Ensley—Ensley Bank & Trust Co., capital \$100,000, formed by John F. Fletcher, Pres., P. G. Shook, James A. Vann and Crawford Johnson, Sr.; purchased Ensley National Bank.

Fla., Jacksonville—State Finance Co., 214 Hogan St., to open; L. W. Hazard, Mgr.

Ga., Valdosta—Federal Land Bank to open office, to be in charge of R. S. Cornwall.

N. C., Cliffside—Haynes Bank consolidated with Cliffside institution.

N. C., Durham—National Bank of Durham with capital of \$200,000 approved by Comptroller of the Currency; reorganization of First National Bank of Durham.

Va., Lynchburg—Citizens Savings and Loan Corp. formed by consolidation of Mutual Savings Bank and Trust Co. of Lynchburg Industrial Savings and Loan Corp. and Citizens Savings and Loan Corp.

W. Va., Richwood—Cherry River National Bank, capital \$50,000, chartered by Comptroller of Currency; C. S. Badgett, Pres.

Better Farm Mortgage Terms

Mortgage bankers have reported to the U. S. Department of Agriculture an increase in the proportion of farm mortgage loans made with some provision for payment on the principal during the life of the loans, according to the Bureau of Agricultural Economics. Reports also show a tendency to write loans for longer terms in most states reporting.

American Car and Foundry Company

The thirty-third annual report of the American Car and Foundry Company, with general offices in New York, St. Louis and Chicago, and principal office in Jersey City, N. J., with consolidated balance sheet of American Car and Foundry Company, American Car and Foundry Securities Corporation and the American Car and Foundry Export Company, has been issued in pamphlet form for the fiscal year ended April 30, 1932. The consolidated balance sheet shows total assets of \$99,303,054; preferred stock authorized and outstanding, 300,000 shares of \$100 par value per share; common stock authorized and outstanding, 600,000 shares of no par value; current liabilities, \$2,507,536; reserve accounts, \$4,758,345; consolidated earned surplus account, \$32,037,172, and consolidated net working capital, exclusive of reserves, April 30, 1932, \$19,838,112.

United Gas Corporation

United Gas Corporation, a subsidiary of Electric Power & Light Corporation, New York, in a consolidated statement of income for 12 months ended May 31, 1932, shows a balance of \$10,305,071 applicable to interest of the corporation, or three and one-quarter times interest deductions of \$3,178,266. The balance of \$7,126,805 after these interest deductions was equal to more than two and one-quarter times dividends for 12 months on the company's \$7 preferred stock. After dividends on \$7 preferred stock, a balance of \$4,001,537 was sufficient within \$1,332,557 to meet dividends of \$5,334,094 for the period on the \$7 second preferred stock.

First National Bank in Dallas

According to a statement of the condition of the First National Bank in Dallas, Dallas, Tex., as of June 30, 1932, the institution had total resources of \$83,940,377, including loans and discounts of \$46,553,932; cash on hand with Federal Reserve Bank, \$7,086,210; with other banks \$8,756,166, and with the United States Treasurer, \$147,250. The bank has a paid in capital stock of \$8,000,000; surplus fund of \$2,000,000, and total deposits of \$65,727,133.

\$580,000 Birmingham Bonds

Birmingham, Ala.—Bonds in the amount of \$580,000 have been sold by the Birmingham City Commission, on the basis of a 6 per cent yield, to the First National Bank and the Birmingham Trust & Savings Company. Of the total, \$250,000 are grade separation bonds for work on the Twentieth Street underpass; \$170,000 drainage bonds to pay for work already done on the Village and Valley Creeks drainage project, and \$160,000 public improvement bonds.

\$243,000 Baltimore School Bid

The P. C. Streett Engineering Company, local builders, submitted low bid of \$243,800 to the Board of Awards, Baltimore, for the construction of a new school building for negro handicapped children. The structure will occupy the block bounded by Franklin, Mulberry and Schroeder streets, and Arlington avenue. It is scheduled for completion by September, 1933. William F. Stone, Jr., Baltimore, is the architect.

BANK RECORD GOOD

New Orleans, La.—During the present year only five Louisiana banks have closed and out of that number four have opened again, according to O. H. Pittman, chief bank examiner of the State Banking Department.

The four banks which have reopened have a combined capitalization of about \$250,000.

\$3,800,000,000 RELIEF FUND

Approval of \$2,122,000,000 Relief Bill

Nearly Doubles Reconstruction Finance Corporation Funds

Washington, D. C.—President Hoover has approved the new Federal Relief bill carrying total appropriations of \$2,122,000,000, thus practically doubling the resources of the Reconstruction Finance Corporation by massing \$3,800,000,000 into one fund for invigorating business, increasing employment and relieving destitution. The new measure makes available \$300,000,000 for advances to states for unemployment relief; \$1,500,000,000 for public construction, self-liquidating private loans and financing agriculture through credit corporations; \$120,000,000 for advances to states under the Federal-aid highway law; \$16,000,000 for roads and trails in national parks and forests, and \$186,224,000 for public buildings and waterway improvements when the condition of the Treasury permits. Of total funds made available by the new measure, \$337,950,000 already is to be applied for by states or other eligible units.

FLORIDA for FARMING

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Plan to personally investigate the advantages of farming in Florida.

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BALTIMORE COMMERCIAL BANK

GWYNN CROWTHER, President

26 South Street, Baltimore, Md.

Capital and Surplus \$1,350,000

Member Federal Reserve System

Electric Bond and Share Company

Two Rector Street, New York

\$123,000,000 Expenditure Planned

Washington, D. C.—Plans have been laid by the Treasury and Postoffice departments for the expenditure of \$123,000,000 during the fiscal year which began July 1 for the erection of Federal buildings throughout the country. This construction is a part of a Federal building program now in progress, which will require several more years to complete, involving an ultimate expenditure of \$700,000,000. Congress has already appropriated \$496,463,000 for buildings which have been authorized and the relief bill passed just before Congress adjourned appropriated another \$100,000,000 to be expended whenever the Secretary of the Treasury can certify to the President that money is available to start additional work. Buildings to be erected under the provisions of this bill will be selected by the Treasury Department from a list already allocated by Congress. Work is expected to begin on these in the next fiscal year.

On July 1 of this year the Treasury Department had \$118,000,000 of public buildings under obligation and during the present fiscal year expects to place another \$110,000,000 under contract, expending in the fiscal year \$123,000,000. A provision in the economy bill stipulated that the cost of all Federal building projects now under contract must be cut 10 per cent. To carry out this provision, Treasury architects expect to be able to revise plans of most of the structures to come within the reduced limit, it is said, but in some cases will call for supplementary bids reducing the cost, and in others will call for new bids. About 220 projects will be affected.

Under its building program started in 1928, the Treasury Department had completed 205 buildings by July 1 of this year, at a cost of \$64,689,919. It had under contract 359 buildings to cost \$307,416,000, while sites purchased in

the District of Columbia had cost \$27,522,000. Bids are on the market or in the specification stage for 118 projects to cost \$53,675,000. Plans are now being drawn in the office of Jas. A. Wetmore, Acting Supervising Architect of the Treasury Department, for 44 projects and in the offices of private architects for 62 projects, the combined cost of which will be \$31,324,000. The Government owns land for three additional projects, to cost \$595,000, for which drawings have not been started, and has selected sites for six projects to cost \$1,780,000, but has not received titles. Sites for four buildings are awaiting selection. These structures will cost \$1,585,000, while 15 projects held up for amended legislation, will cost \$6,700,000. The Treasury still has available \$1,157,477 for purchasing land in the District of Columbia.

\$1,000,000 SEWER WORK

Louisville Plans Another Section of Southwestern Outfall Project

Louisville, Ky.—Plans are being made by the Commissioners of Sewerage for the construction in the fall of another section of the Southwestern outfall sewer, for which plans will likely be ready August 15. This new section would extend from Cane Run Road to a point within 400 feet of the Dixie Highway. Bids are expected to be opened about September 15. Woolsey M. Caye, engineer, estimates the cost of the new section at \$1,000,000.

FEDERAL-AID FUNDS AVAILABLE FOR ROADS

The emergency highway appropriation of \$120,000,000 for use on Federal Aid projects as contained in "The Emergency Relief and Construction Act for 1932" approved by Congress just prior to adjournment will be distributed to the states in accordance with regular Federal-Aid requirements on the basis of three factors: Population, Area and Mileage of Post Roads, the American Road Builders' Association announces.

The approximate amount of money which will be available to each of the Southern states is as follows:

Alabama	\$2,550,053
Arkansas	2,091,431
Florida	1,629,204
Georgia	3,120,191
Kentucky	2,259,648
Louisiana	1,740,196
Maryland	1,015,296
Mississippi	2,160,628
Missouri	3,761,014
North Carolina	2,890,203
Oklahoma	2,893,101
South Carolina	1,666,492
Tennessee	2,609,757
Texas	7,668,024
West Virginia	1,316,720
Virginia	2,258,196

As a result of the enactment of the relief bill, Federal participation in highway building is maintained on a par with 1931.

The example of the Federal Government and the recognition accorded highway activity in relief of unemployment by this emergency appropriation should stimulate similar action by states, cities and counties in making available additional funds for highway operations, the Association believes. The Federal funds will not only create new work to the extent of the appropriation of \$120,000,000 but will be used in lieu of State funds in matching regular Federal-Aid and thereby make available for immediate expenditure regular Federal-Aid funds which some states had been unable to match.

REFUSE DISPOSAL PLANT CONTRACTS AWARDED

**Baltimore Goes Forward With Garbage
and Rubbish Project Estimated to In-
volve \$4,292,000 in Ten Year Period**

In connection with fulfillment of a contract with the City of Baltimore for the construction of a garbage and rubbish incinerating plant, the operation of the plant for a period of 10 years and the collection of rubbish for five years, the E. T. Foreman Co., of Baltimore, has awarded a contract to the Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa., for furnishing the necessary incinerating equipment and a contract for the required building construction to Charles L. Stockhausen Co., Inc., of Baltimore. The plant, to be erected on city owned land, is to be turned over to the city at the expiration of the contract.

The Foreman Co. bid \$4.10 a ton for collecting the rubbish; \$.80 a ton for incineration of the rubbish and \$1.85 a ton for incineration of the garbage. Over a five-year period the cost to the city for collecting and hauling rubbish is estimated at \$2,460,000, based on an

estimated annual tonnage of 44,000. For 10 years the cost of rubbish incineration is estimated at \$352,000, based on an estimated tonnage of 44,000 annually. The incineration of garbage estimated to total 80,000 tons annually is estimated at \$1,480,000. The total estimated bid for the life of the contract is therefore \$4,292,000.

Garbage, under the present set-up, is to be collected and delivered to the plant by city forces in city-owned vehicles. It is proposed to have the plant ready for operation by January 1, 1933.

HOSPITAL CONTRACT LET

Fayetteville, Ark. — General contract for the construction of buildings and utilities for a Veterans Administration Hospital at Fayetteville has been formally awarded by the Veterans Administration, Washington, to M. E. Gillioz of Monett, Mo., at \$533,500. The project will embrace 11 buildings, including a main structure, 125 by 275 feet; administration building, 50 by 150 feet; nurses' home, 100 by 150 feet, boiler house and other structures. W. J. Riley, Monroe, La., submitted low bid, at \$183,000, for

plumbing, heating and electric work; Montgomery Electric Company, Moline, Ill., at \$9866, for electric elevator; W. E. Caldwell Co., Louisville, Ky., at \$6774, for steel water tank and tower, and W. F. Moody & Company, Little Rock, Ark., at \$16,625, for a refrigeration and ice making plant. The City of Fayetteville recently voted a \$65,000 bond issue to finance the purchase of the site.

\$4,000,000 POWER STATION

**Stone and Webster Engineering Corpora-
tion Designing Big Washington Project**

Washington, D. C.—The Potomac Electric Power Company of this city has closed a contract with the Stone & Webster Engineering Corporation, Boston, Mass., whereby the latter will furnish, when called upon, consulting engineering and construction service. Under this contract, the Stone & Webster corporation is now preparing plans for construction of a new steam power station for the Potomac Electric Power Company at Buzzard's Point, at the junction of the Anacostia and Potomac Rivers, Washington. Initial installation will probably be 35,000 kilowatts.



BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



PROPOSALS

Bids close August 9, 1932.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., July 12, 1932.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., August 9, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. post office, etc., at Auburn, Ala. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any subcontractor or material firm interested and to quantify surveyors, provided a deposit of \$15.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 11, 1932.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., July 12, 1932.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., August 11, 1932, for furnishing all labor and materials and performing all work for the construction complete of the U. S. post office, etc., at Jeannette, Pa. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three (3) sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and

GENERAL INFORMATION

**About Proposal Advertising
in Manufacturers Record**

**PUBLICATION DAY: Thursday.
FORMS CLOSE: 10 A. M. Tuesday.**

When too late to send copy by regular mail to reach us by 10 A. M., Tuesday, forward by night letter or air mail when possible.

THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

provided a deposit of \$15.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any sub-contractor or material firm interested and to quantify surveyors, provided a deposit of \$15.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 2, 1932.

Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for the building of One Section of State Highway as follows:

Baltimore County, Contract B-253-411—One section of State Highway along the Reisterstown Road from Pikesville to Owings Mills for a distance of 3.97 miles (Concrete Base and Concrete Headers)

will be received by the State Road Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 2nd day of August, 1932, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00 for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 8, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 19th day of July, 1932.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close August 16, 1932.

DEPARTMENT OF THE INTERIOR, Washington. Sealed proposals in duplicate will be received at the Department of the Interior until 2 o'clock p. m., Tuesday, August 16, 1932, for furnishing all labor and materials for constructing at Saint Elizabeth's Hospital, Washington, D. C., one male receiving building, and the moving, relocating and remodeling of shops building and T. B. buildings Nos. 1, 2 and 3, including roads, retaining walls, walks, grading and drainage. This work will include excavating, reinforced concrete construction, hollow tile, brick work, cut stone work, granite, architectural terra cotta, marble work, floor and wall tile, terrazzo floors, linoleum floors, miscellaneous structural and ornamental metal work, steel sash, steel stairs, tile, metal and built-up roofing, metal lathing, plastering, carpentry, laundry chutes, metal weather strips, insect screens, window shades, painting, glazing, hardware, plumbing, heating and

ventilating, electrical work and outside service connections. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract, and in making awards the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. Drawings and specifications may be obtained upon application to the Construction Service, Veterans' Administration, Room 764 Arlington Building, Washington, D. C. While no deposit will be necessary, the return of the drawings within ten days after opening of bids will be required. Special attention is invited to requirements of the act of March 3, 1931, regarding rate of wages, set forth in the specifications. The entire work must be completed within 300 calendar days. The right is reserved to reject any or all bids, waive technical defects, accept one

part and reject the other as the interests of the Government may require. Proposals must be securely enveloped, marked "Proposal for construction of male receiving building, Saint Elizabeth's Hospital," and be addressed to the Secretary of the Interior, Washington, D. C. JOS. M. DIXON, Acting Secretary.

Bids close August 3, 1932.

U. S. Engineer Office, Rock Island, Illinois. Sealed proposals, in duplicate, will be received until 2.30 P. M., August 3, 1932, and then publicly opened, for furnishing all plant, labor and material for, and supplying, assembling and installing the following complete and ready for operation, and the necessary concrete foundations:—lock operating machinery for two parallel locks, power house equipment, and electric power and control system for Lock & Dam No. 15, Mississippi River. Further information on application.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

75 CENTS PER ACRE. 31,000 acres. Best cattle land, near railroad. Water. Timber. Clear title. Half cash, or trade clear for clear. Box 2707, Mexico, D. F.

FARM, FRUIT AND TRUCK LANDS

DELAWARE

FOR SALE

Estate in Delaware of six hundred acres. Four hundred acres tillable, one hundred acres woodland, one hundred acres game preserve, large mansion house, old shade trees, farm house, two complete sets of buildings.

GEORGE L. TOWNSEND,
401 Equitable Building,
Wilmington, Delaware.

TEXAS

TEXAS, Lower Rio Grande Valley. Finest irrigated citrus fruit land; tracts 500 acres up, \$75. Also bargains in ranches. Box 36, San Antonio, Tex.

BUSINESS OPPORTUNITIES

HAIR PIN—Wanted manufacturer to make and market newly patented invisible type wire hair pin. Holds hair secure, easy to insert. Particulars, write No. 9197, care of Manufacturers Record, Baltimore, Md.

WE WILL SAVE YOU 40% on construction of your ice and cold storage plant. Many plants designed by us are producing ice under \$2.00 per ton and our cold storage plants eliminate Sunday and night running of compressors. Inquiries solicited. Mayer Construction Co., 3850 Lausdowne Ave., Cincinnati, Ohio.

PUBLIC SALE—Scheller Brothers, 1314 acres timber land, band mill and equipment, including short line railroad, by J. W. Harman and W. K. Pritt, Special Receivers, August 13, 1932, at one o'clock P. M., Court House, Parsons, West Virginia. Sale on terms. Splendid opportunity for lumbermen.

PUBLIC AUCTION

Fully equipped factory for the manufacture of Dry Batteries, machinery and equipment in first class condition, stock of raw material used in such manufacture, batteries in process, delivery equipment, laboratory equipment, office furniture and fixtures. Good-will, trade marks, formulas, accounts receivable, etc.; in fact, all of the assets of the Southern Battery & Electric Corporation of Appomattox, Virginia, will be sold at Public Auction on the premises of the above company at 10.00 A. M. August 6, 1932. Terms 1/3 cash, balance on notes of six and eight months, bearing approved endorsement, with interest from date of sale. F. C. DRESSER, Receiver, Appomattox, Virginia.

Rates, Terms and Conditions

RATES: 30 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to line. When the advertisement contains a number of long words proper allowance should be made.

Rates for Special Contract:

100 lines 28c a line
300 lines 26c a line
500 lines or more 25c a line.

TERMS: For transient advertising cash with order; check, post office or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

CONDITIONS: No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

FACTORY SITES

FOR SALE—Factory site for veneer plant, Boiler, Boiler Feed Pump, Side Track, Two Lathes, Clippers, etc. Priced to sell. COLUMBIA PANEL MFG. CO.,
Thomasville, N. C.

WAREHOUSE

FOR RENT OR LEASE—We have at Norfolk, located on a broad street, with alley on two sides, five-story reinforced concrete warehouse, approximately 88 ft. wide by 184 ft. deep. This building is well located near team track of Norfolk & Western Railroad; has two large freight elevators; each floor cut off by fire doors. Please address P. O. Box 476, Norfolk, Va.

INDUSTRIAL PLANTS

COTTON MILL For Sale

5500 Spindles
260 Looms
360 H.P. New Diesel Engine
Brick Buildings
Good Tenant Houses
Good Labor Conditions
Exceedingly cheap—Good terms
Low Taxes
For further information write No. 9188, care Manufacturers Record, Baltimore, Md

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1408-R Johnston Bldg., Charlotte, N. C.
434 Munsey Building, Washington, D. C.
417 Wachovia Bldg., Winston-Salem, N. C.

FREE "PATENT PARTICULARS"
Sterling Buck, over 25 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

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SEYMOUR & BRIGHT, Registered Patent Attorneys. Established 1876. PATENTS, TRADEMARKS, COPYRIGHTS. Prompt and thorough service. Suite 892, National Press Building, Washington, D. C.

SITUATIONS WANTED

AN EXECUTIVE, age 47, skilled mechanic and machine designer, with many years sales experience, wants connection with live mfg. concern, in shop or office. F. H. Goosmann, 730 Froome Ave., Cincinnati, O.

MEN WANTED

IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty-two years. Send only name and address for details.

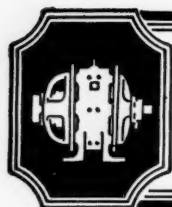
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No. 2 Heavy Ohio Universal Miller,
Complete equipment. Excellent... 550.00
24" Cincinnati B. G. Crank Shaper... 500.00
All sizes Welding Machines; Air Compressors, Generators, etc. Send for our catalog. Terms to suit.
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25 West Second St., Cincinnati, O.

MACHINERY AND SUPPLIES WANTED

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ESTABLISHED 1865

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All sizes and lengths. Fabricated and cut to size. Call or write
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610 cu. ft. capacity Ingersoll Rand size 15"-9 1/4" x 12", synchronous motor driven.
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For All Purposes
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All transformers guaranteed for one year
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All set with steel casings; equipped with stacks, fronts, steam fittings, etc.
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Made of heavy material—reinforced.
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An inexpensive Paving and Patching material; easily laid without heating.

Because of its long proven quality, is used successfully on *State Highways, City Streets, Country Roads, Re-surfacing, Maintenance, Driveways, Bridge Surfacing, Street Railways, Railroad Crossings, Air Ports, Parking Space, Sidewalks, Factory Floors and Tennis Courts.*

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Quarries opened up in 1912.
Capacity 8000 tons daily.

Four Quarries

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Manufacturers of Rails, Frogs, Switches,
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Catalog will be sent on request

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De Laval Steam Turbine Co., Trenton, N.J.
General Electric Co., Schenectady, N. Y.
Westinghouse Traction Brake Co., Wilmerding, Pa.

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Moyer Co., Tilghman, Allentown, Pa.

ARCHITECTS' SUPPLIES.

Weber Co., Inc., Philadelphia, Pa.

ASPHALT.

Gulf Refining Co., Pittsburgh, Pa.

—Filler.

American Limestone Co., Knoxville, Tenn.

—Paving.

Barber Asphalt Co., Philadelphia, Pa.

BALLAST (Railroad.)

American Limestone Co., Knoxville, Tenn.

BANKS and TRUST COMPANIES.

Baltimore Commercial Bank, Balto., Md.
Baltimore Trust Co., Baltimore, Md.
First and Merchants National Bank, Richmond, Va.

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American Bridge Co., Pittsburgh, Pa.
McClintic-Marshall Corp., Bethlehem, Pa.

BARS (Steel, Rounds, Flats, Hexagon and Squares.)

Carnegie Steel Co., Pittsburgh, Pa.
Sweet's Steel Corp., Williamsport, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.

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Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.

BILLETS (Basic Open Hearth.)

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

BLINDS (Venetian and Awning.)

Wilson Corp., The J. G., New York.

BLOCKS (Chain.)

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Charleston Dry Dock & Machine Co., Charleston, S. C.
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Cole Mfg. Co., R. D., Newnan, Ga.
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National Tube Co., Pittsburgh, Pa.

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Progressive Mfg. Co., Torrington, Conn.
Virginia Bridge & Iron Co., Roanoke, Va.

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Sweet's Steel Co., Williamsport, Pa.

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Kennedy-Riegler Drilling Co., New York.
Mott Core Drilling Co., Huntington, W. Va.
Pennsylvania Drilling Co., Pittsburgh, Pa.
Sprague & Henwood, Inc., Scranton, Pa.

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Friend & Co., Inc., Petersburg, Va.

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National Paving Brick Assn., Washington, D. C.

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Earle Gear & Machine Co., Phila., Pa.

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Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.

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Belmont Iron Works, Philadelphia, Pa.
Bristol Steel & Iron Works, Inc., Bristol, Va.
McClintic-Marshall Corp., Bethlehem, Pa.
Roanoke Iron & Bridge Wks., Roanoke, Va.
Virginia Bridge & Iron Co., Roanoke, Va.

BURBLERS.

Rundie-Spence Mfg. Co., Milwaukee, Wis.

BUCKETS (Clam Shell.)

Owen Bucket Co., Cleveland, Ohio.
Wellman Engr. Co., Cleveland, O.

—(Coal.)

Owen Bucket Co., Cleveland, O.
Wellman Engr. Co., Cleveland, O.

—(Dredging, Excavating, Sewer, etc.)

Owen Bucket Co., Cleveland, Ohio.
Wellman Engr. Co., Cleveland, O.

—(Material Handling.)

Owen Bucket Co., Cleveland, O.
Wellman Engr. Co., Cleveland, O.

—(Ore Handling.)

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Owen Bucket Co., Cleveland, O.
Wellman Engr. Co., Cleveland, O.

—(Sand and Gravel.)

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Wellman Engr. Co., Cleveland, O.

BUILDERS and Contractors.

Moyer Co., Tilghman, Allentown, Pa.

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North Carolina Granite Corp., The Mount Airy, N. C.

BUILDINGS (Industrial.)

McClintic-Marshall Corp., Bethlehem, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.

BULKHEADS.

Shore-Line Builders, Inc., Jacksonville, Fla.

BURLAP.

Fulton Bag & Cotton Mills, Atlanta, Ga.

CABLE.

American Cable Co., New York, N. Y.

—(Elevator.)

American Steel & Wire Co., Chicago, Ill.

CABLE AND WIRE (Electric.)

American Steel & Wire Co., Balto., Md.

Western Electric Co., New York, N. Y.

CALCIUM CHLORIDE.

Grasselli Chemical Co., Inc., Birmingham.

CANVAS.

Fulton Bag & Cotton Mills, Atlanta, Ga.

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Southern Iron & Equipment Co., Atlanta.

CASSIONS (Foundations, Water Wells, etc.)

United Welding Co., Middletown, O.

CASTINGS (Alloy.)

Cincinnati Steel Castings Co., Cincinnati, Ohio.

—(Brass, Bronze and Aluminum.)

Richmond Foundry & Mfg. Co., Richmond, Va.

—(Gray Iron.)

Glamorgan Pipe & Fdy. Co., Lynchburg, Va.
Jefferson Foundry Co., Birmingham, Ala.
Richmond Foundry & Mfg. Co., Richmond, Va.
Salem Fdry. & Mch. Wks., Salem, Va.

—(Semi-Steel.)

Jefferson Foundry Co., Birmingham, Ala.
Salem Fdry. & Mch. Wks., Salem, Va.

—(Steel.)

Bethlehem Steel Co., Bethlehem, Pa.
Cincinnati Steel Castings Co., Cincinnati, Ohio.
Crucible Steel Casting Co., Lansdowne, Delaware Co., Pa.
Lankenshelmer Co., Cincinnati, Ohio.

CEMENT (Portland.)

Alpha Portland Cement Corp., Birmingham, Ala.

CHEMICALS.

Grasselli Chemical Co., Inc., Birmingham.

CHEMISTS, CHEMICAL ENGINEERS (Analytical.)

Froehling & Robertson, Inc., Richmond, Va.
Hunt Co., Robert W., Chicago, Ill.
Picard Laboratories, Birmingham, Ala.

CHIMNEYS (Concrete.)

East Engineering Co., Birmingham, Ala.

—(Radial Brick.)

East Engineering Co., Birmingham, Ala.

CHUTES (Mail.)

Cutler Mail Chute Co., Rochester, N. Y.

CIRCUIT BREAKERS.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

COAL (Bituminous.)

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

COAL and Ash-Handling Mchry.

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

—Tipples.

American Bridge Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.

COKE.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

CONCRETE Construction (Reinforced.)

East Engineering Co., Birmingham, Ala.

CONCRETE MIXERS.

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.
Jaeger Machine Co., Columbus, Ohio.

CONDENSERS.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

CONDUITS (Electric, Interior, Steel.)

Western Electric Co., New York, N. Y.

CONTRACTORS (Bridge.)

Hardaway Contracting Co., Columbus, Ga.
Snare Corp., Frederick, New York, N. Y.

—(Drainage and Dredging.)

Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

—Drilling.

Kennedy-Riegler Drilling Co., New York City.
Mott Core Drilling Co., Huntington, W. Va.
Pennsylvania Drilling Co., Pittsburgh, Pa.
Sprague & Henwood, Inc., Scranton, Pa.

—(Electrical.)

Walker Electrical Co., Atlanta, Ga.
Warner Service Co., Knoxville, Tenn.
Webb Electric Co., Anderson, S. C.

—(Foundations and Dams.)

Snare Corp., Frederick, New York, N. Y.

CONTRACTORS (General.)

Blair, Algonon, Montgomery, Ala.
Burke, Inc., J. V. & E. T., New Orleans.
Cornell Young Co., Inc., Macon, Ga.
Flake-Carter Constr. Co., Greenville, S. C.

—(Industrial Buildings.)

Blair, Algonon, Montgomery, Ala.
Flake-Carter Constr. Co., Greenville, S. C.
Lockwood Greene Engrs., Inc., Boston.

—(Marble.)

Thrower Marble & Tile Co., Charlotte, N. C.

—(Power Piping.)

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

—(Railroad.)

Cornell-Young Co., Inc., Macon, Ga.

—(Reinforced Concrete.)

Blair, Algonon, Montgomery, Ala.

—(Road and Street Paving.)

Flake-Carter Constr. Co., Greenville, S. C.

—Bubble Stone

Brown, Jas. W., Greensboro, N. C.

—(Bewerage and Waterworks.)

Hardaway Contracting Co., Columbus, Ga.
Layne & Bowler, Inc., Memphis, Tenn.
Snare Corp., Frederick, New York, N. Y.

—(Sprinkler System.)

Poe Piping & Heating Co., Greenville, S. C.

—Stone, Cut

Brown, Jas. W., Greensboro, N. C.

—Structural Steel.

Stewart, Harvey H., Charlotte, N. C.

—(Tile.)

Thrower Marble & Tile Co., Charlotte, N. C.

CONTRACTORS MACHINERY AND SUPPLIES.

(Used.)

Equipment Corp. of America, Chicago, Ill.
Lima Excavator Sales Agency, Lima, Ohio.
Marine Metal & Supply Co., New York.

CONTRACT WORK WANTED.

(See following classifications:)

Castings.
Foundries and Machine Shops.
Machinery (Special).
Ornamental Iron Work.
Patterns (Drawing, etc.).
Sheet Metal Work.
Structural Steel and Iron.

CONVEYING and ELEVATING MACHINERY.

Cleveland Crane & Engr. Co., Wickliffe, Ohio.

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

CRANES.

Austin-Western Road Mchry. Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Crawler.)

Austin-Western Road Machinery Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Crawling Tractor.)

Austin-Western Road Mchry. Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Electric Travelling.)

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

—(Full Circle Steam and Electric.)

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Gasoline.)

Austin-Western Road Mchry. Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Jib.)

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

—(Locomotive.)

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Material Handling.)

Austin-Western Road Mchry. Co., Chicago, Ill.

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

—(Travelling, hand power.)

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

Wright Mfg. Co., Bridgeport, Conn.

CREOSOTE OIL.

American Creosote Wks., New Orleans, La.
Ayer & Lord Tie Co., Chicago, Ill.

CREOSOTED WOOD MATERIALS.

American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
Eppinger & Russell Co., New York, N. Y.
Gulf States Creos. Co., Hattiesburg, Miss.
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

CROSS ARMS, TIES (Creosoted.)

American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
Eppinger & Russell Co., New York, N. Y.

CRUSHED STONE (Road Concrete and Ballast.)

American Limestone Co., Knoxville, Tenn.
Boxley & Co., W. W., Roanoke, Va.
Culbert & Sons, W. F., Marion, Va.

CRUSHERS (Rock.)

Grumder Crusher & Pulverizer Co., St. Louis, Mo.

CRUSHING and Pulverizing Machinery.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Austin-Western Road Machinery Co., Chicago, Ill.
Grumder Crusher & Pulverizer Co., St. Louis, Mo.

CULVERT PIPE (Cast Iron.)

Cast Iron Pipe Research Assn., Chicago.

—(Corrugated Metal.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.

CYLINDERS (Compressed Air, Gas.)

National Tube Co., Pittsburgh, Pa.

DITCHING MACHINERY.

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

DOORS (Cabinet Woodwork.)

Mitchell Mfg. Co., Robert, Cincinnati, O.

—(Fireproof, Air Chamber.)

Wilson Corp., The J. G., New York.

—(Rolling, Steel and Wood.)

Wilson Corp., The J. G., New York.

—(Vault.)

York Safe & Lock Co., York, Penna.

DRAFTSMEN'S SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

DRAGLINE EXCAVATORS.

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

DREDGING (River and Harbor Improvement.)

Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

DRILLS (Diamond and Shot Core.)

Sprague & Henwood, Inc., Scranton, Pa.

—(Oil and Artesian Well.)

Virginia Machinery & Well Co., Inc., Richmond, Va.

DRINKING FOUNTAINS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

ELECTRICAL Instruments and Supplies.

General Electric Co., Schenectady, N. Y.
Western Electric Co., New York, N. Y.

ELECTRICAL MACHINERY

(Generators, Motors, etc., New.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Partridge, Arthur S., St. Louis, Mo.
Rockford Power Machy. Co., Rockford, Ill.

—(Generators, Motors, etc., Used.)

Delta Equipment Co., Philadelphia, Pa.
Electric Service Co., Cincinnati, Ohio.
General Electric Co., Schenectady, N. Y.
O'Brien Machinery Co., The, Phila., Pa.
Reading Engineering Wks., Reading, Pa.
Rockford Power Machy. Co., Rockford, Ill.

—Repairing (Motors, Generators, etc.)

Electric Service Co., Cincinnati, Ohio.

ELECTRIC LIGHTING.

General Electric Vapor Lamp Co., Hoboken, N. J.
Westinghouse Lamp Co., New York City.

ELECTRICAL MACHINERY

(Generators, Motors, etc., New.)
Fairbanks, Morse & Co., Chicago, Ill.
Partridge, Arthur S., St. Louis, Mo.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

ELEVATORS (Electric.)

Millner Co., St. Louis, Mo.

—(Hand and Belt Power.)

Millner Co., St. Louis, Mo.

ENGINEERS (Airports.)

Lockwood Greene Engrs., Inc., New York.

—(Appraisal.)

Main, Inc., Chas. T., Boston, Mass.
Wiedeman and Singleton, Inc., Atlanta.

—(Bridge.)

Gardner & Howe, Memphis, Tenn.
Hardaway Contracting Co., Columbus, Ga.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Steel & Leiby, Knoxville, Tenn.
Virginia Bridge & Iron Co., Roanoke, Va.
Wiley & Wilson, Lynchburg, Va.

—(Chemical.)

Dow, A. W., New York.
Picard Laboratories, Birmingham, Ala.

—(Civil.)

Saxe, Van Rensselaer P., Baltimore, Md.
Spring, Chas. Herbert, Greensboro, N. C.
Steel & Leiby, Knoxville, Tenn.
Wiley & Wilson, Lynchburg, Va.

—(Consulting.)

Converse & Co., J. B., Mobile, Ala.
Engineering Service Corp., Houston, Tex.
Goder, Joseph, Chicago, Ill.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Saxe, Van Rensselaer P., Baltimore, Md.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

—(Dams.)

Gardner & Howe, Memphis, Tenn.
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
Lee Engineering Corp., William S., Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

—(Electrical.)

Engineering Service Corp., Houston, Tex.
Webb Electric Co., Anderson, S. C.
Wiley & Wilson, Lynchburg, Va.

—(Electric Light and Power.)

Bylesby Engineering and Management Corp., Chicago, Ill.
Lee Engineering Corp., William S., Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

—(Gas.)

Bylesby Engineering and Management Corp., Chicago, Ill.

—(Geological.)

Proehling & Robertson, Inc., Richmond, Va.

—(Harbor Improvements.)

Engineering Service Corp., Houston, Tex.

—(Heating.)

Wiley & Wilson, Lynchburg, Va.

—(Hydraulic.)

Wiley & Wilson, Lynchburg, Va.

—(Hydro-electric.)

Bylesby Engineering and Management Corp., Chicago, Ill.
Lee Engineering Corp., William S., Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

—(Ice and Refrigerating.)

Engineering Service Corp., Houston, Tex.

—(Industrial Plants.)

Converse & Co., J. B., Mobile, Ala.
Gardner & Howe, Memphis, Tenn.
Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.
Wiley & Wilson, Lynchburg, Va.

—(Industrial Survey.)

Converse & Co., J. B., Mobile, Ala.
Lockwood Greene Engrs., Inc., New York.

—(Inspection and Tests.)

Dow, A. W., New York.
Proehling & Robertson, Inc., Richmond, Va.
Hunt Co., Robert W., Chicago, Ill.
McCallum Inspection Co., Norfolk, Va.
Picard Laboratories, Birmingham, Ala.

—(Lighting.)

General Electric Vapor Lamp Co., Hoboken, N. J.
Westinghouse Lamp Co., New York City.
Wiley & Wilson, Lynchburg, Va.

—(Mechanical.)

Wiley & Wilson, Lynchburg, Va.

—(Mining. See Engineers, Geological.)**—(Municipal.)**

Harrub Engr. Co., C. N., Nashville, Tenn.
Wiley & Wilson, Lynchburg, Va.

—(Paving and Roads.)

Dow, A. W., New York.
Harrub Engr. Co., C. N., Nashville, Tenn.

—(Public Service Properties.)

Bylesby Engineering and Management Corp., Chicago, Ill.
Main, Inc., Chas. T., Boston, Mass.

—(Reinforced Concrete Bridges, Buildings, etc.)

Saxe, Van Rensselaer P., Baltimore, Md.
Steel & Leiby, Knoxville, Tenn.

—(Sanitary.)

Wiley & Wilson, Lynchburg, Va.

—(Sewage Disposal Plants.)

Wiley & Wilson, Lynchburg, Va.

—(Sewerage and Waterworks.)

Harrub Engr. Co., C. N., Nashville, Tenn.
Wiedeman & Singleton, Inc., Atlanta, Ga.
Wiley & Wilson, Lynchburg, Va.

—(Structural.)

Saxe, Van Rensselaer P., Baltimore, Md.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Textile Mills.)

Lockwood Greene Engrs., Inc., New York.
Main, Inc., Chas. T., Boston, Mass.

—(Ventilating and Heating.)

Wiley & Wilson, Lynchburg, Va.

—(Water Supply.)

Wiley & Wilson, Lynchburg, Va.

ENGINES (Compressed Air.)

Duke Engine Co., Grand Haven, Mich.

—(Diesel Type.)

Fairbanks, Morse & Co., Chicago, Ill.
Superior Engine Co., Springfield, O.

—(Gas and Gasoline.)

Sterling Engine Co., Buffalo, N. Y.

—(Marine.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

ENVELOPES.

Young & Seiden Co., Baltimore, Md.

ERECTOR (Structural Steel.)

Stewart, Harvey H., Charlotte, N. C.

ESTIMATORS (Building & Construction.)

Spring, Chas. Herbert, Greensboro, N. C.

EXCAVATING MACHINERY.

Austin-Western Road Machinery Co., Chicago, Ill.
Northwest Engineering Co., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.

EXCAVATORS (Clamshell and Orange Peel.)

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

—(Dragline. See Dragline Excavators.)**—(Trench.)**

Ohio Power Shovel Co., Lima, Ohio.

FEED-WATER HEATERS and Purifiers.

American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.

FENCING, ENTRANCE GATES

(Iron, Steel and Wire.)
American Steel and Wire Co., Balto., Md.
Cyclone Fence Co., Waukegan, Ill.

FENCING (Field and Industrial, Wire Woven.)

American Steel and Wire Co., Balto., Md.
Cyclone Fence Co., Waukegan, Ill.

FERTILIZER Mixing Plants.

Grumder Crusher & Pulverizer Co., St. Louis, Mo.

FILTERS (For Domestic and Industrial Purposes.)

American Water Softener Co., Phila., Pa.
Bacharach & Co., E. W., Kansas City, Mo.
International Filter Co., Chicago, Ill.
Roberts Filter Mfg. Co., Darby (Phila.).

FINANCING.

Electric Bond & Share Co., New York.

FIREPROOF Doors and Shutters

Wilson Corp., The J. G., New York City.

FITTINGS (Wire Rope.)

American Steel & Wire Co., Chicago, Ill.

FLANGES (Iron and Steel.)

Dart Mfg. Co., E. M., Providence, R. I.

FLOOR (Asphalt Mastic.)

Barber Asphalt Co., Philadelphia, Pa.

—(Northern Hard Maple.)

Holt Hardwood Co., Oconto, Wis.

—(Open Steel.)

Kerlow Steel Flooring Co., Jersey City, N. J.

FLOOR Plates and Stair Treads.

Central Iron & Steel Co., Harrisburg, Pa.

FLOOR SURFACING (Concrete, Wood, etc.)

Union Products Co., Cleveland, Ohio.

FOUNDRIES and Machine Shops.

General Machine Works, York, Pa.
Glamorgan Pipe & Fdy. Co., Lynchburg, Va.
Richmond Foundry & Mfg. Co., Richmond, Va.

FOUNDRY Equipment and Supplies.

Hill & Griffith Co., Cincinnati, O.

FOUNDRY FACINGS (Tale and Soapstone.)

Hill & Griffith Co., Cincinnati, O.

GALVANIZED Products.

Cattle & Bros., Jos. F., Philadelphia, Pa.

—Steel and Iron.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

GAS (Domestic, Industrial Use.)

American Gas Assn., New York, N. Y.
Associated Gas & Elec. System, New York, N. Y.

GAS HOLDERS.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
McClintic-Marshall Corp., Bethlehem, Pa.

GASOLINE and KEROSENE.

Gulf Refining Co., Pittsburgh, Pa.

GEARS.

Earle Gear & Machine Co., Phila., Pa.
General Electric Co., Schenectady, N. Y.

GENERATORS, MOTORS (New.)

General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

—(Used.)

O'Brien Machinery Co., Phila., Pa.

GEOLOGISTS. (See Engineers Geological.)**GLASS. (Window.)**

Pittsburgh Plate Glass Co., Pittsburgh.

GRADERS (Elevating.)

Austin-Western Road Machinery Co., Chicago, Ill.
Caterpillar Tractor Co., Peoria, Ill.
Gallion Iron Wks. & Mfg. Co., Gallion, O.

GRANITE (Building and Monumental.)

North Carolina Granite Corp., The, Mount Airy, N. C.

GRATING (Area, Flooring, Sidewalk.)

Kerlow Steel Flooring Co., Jersey City, N. J.

GRAVEL (Roofing and Road.)

American Limestone Co., Knoxville, Tenn.
Arundel Corp., The, Baltimore, Md.
Boxley & Co., W. W., Roanoke, Va.
Friend & Co., Inc., Petersburg, Va.

GREASE CUPS.

Lamkenheimer Co., The, Cincinnati, O.

GRILLES (Brass, Bronze, Steel, etc.)

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

GRINDERS WHEELS.

Carborundum Co., Niagara Falls, N. Y.

GUARD RAIL (Road.)

National Traffic Guard Co., Atlanta, Ga.

GUNS (Hydraulic.)

Georgia Iron Works, Augusta, Ga.

HARBOR IMPROVEMENTS.

Arundel Corp., Baltimore, Md.
Atlantic, Gulf & Pacific Co., New York.

HOISTS (Chain.)

Cleveland Crane & Engr. Co., Wickliffe, O.
Wright Mfg. Co., Bridgeport, Conn.

—(Electric, Gasoline.)

Duke Engine Co., Grand Haven, Mich.

- (Steam.)
Dake Engine Co., Grand Haven, Mich.
- HOTELS.**
Southern Hotel, The, Baltimore, Md.
- HYDRANTS (Fire.)**
Myers & Bros. Co., The, F. E. Ashland, Ohio.
- HYDRO-ELECTRIC POWER COMPANIES (Offering Industrial and Commercial Opportunities.)**
Crisp County Power Commission, Cordele, Ga.
- INCINERATORS.**
Brooks-Fisher Co., Atlanta, Ga.
D-N Corporation, New York, N. Y.
Goder, Joseph, Chicago, Ill.
- INCORPORATORS.**
Delaware Registration Trust Co., Wilmington, Del.
- INSULATING Materials**
General Electric Co., Schenectady, N. Y.
- Quilt.
Cabot, Inc., Samuel, Boston, Mass.
- INVESTMENT SECURITIES.**
Electric Bond & Share Co., New York.
- JAIL CELLS.**
Roanoke Iron & Bridge Wks., Roanoke, Va.
- LADDERS (Rolling.)**
Myers & Bros. Co., The, F. E. Ashland, O.
- LAMPS (Incandescent.)**
General Electric Vapor Lamp Co., Hoboken, N. J.
Western Electric Co., New York, N. Y.
Westinghouse Lamp Co., New York City.
- LIGHTING (Factory and Mill.)**
General Electric Vapor Lamp Co., Hoboken, N. J.
Westinghouse Lamp Co., New York City.
- Fixtures (Electric.)
Western Electric Co., New York City.
Westinghouse Lamp Co., New York City.
- LININGS (Flue, Fire Clay.)**
Lee Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.
- LITHOGRAPHERS and ENGRAVERS.**
Smith & Son Co., Oscar T., Balto., Md.
Young & Selden Co., Baltimore, Md.
- LOADING and UNLOADING MACHINERY (Portable.)**
Northwest Engineering Co., Chicago, Ill.
- LOCOMOTIVES. (Gasoline.)**
Whitcomb Locomotive Co., Rochelle, Ill.
- (Industrial.)
Southern Iron & Equipment Co., Atlanta.
Whitcomb Locomotive Co., Rochelle, Ill.
- (Mining.)
Whitcomb Locomotive Co., Rochelle, Ill.
- (Railway.)
Southern Iron & Equipment Co., Atlanta.
Whitcomb Locomotive Co., Rochelle, Ill.
- LUBRICANTS.**
Gulf Refining Co., Pittsburgh, Pa.
- LUBRICATORS (Force Feed.)**
Lunkenheimer Co., The, Cincinnati, O.
- LUMBER (Creosoted.)**
Amer. Creosote Wks., Inc., New Orleans.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Inc., Chicago.
Century Wood Preserving Co., Balto., Md.
Buppinger & Russell Co., New York, N. Y.
Gulf States Creos. Co., Hattiesburg, Miss.
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.
- MACHINERY (Special.)**
Bertsch & Co., Cambridge City, Ind.
Earle Gear & Machine Co., Phila., Pa.
General Machine Works, York, Pa.
Gerding Bros., Cincinnati, O.
- MACHINERY and Supplies (New and Used.)**
Electric Service Co., Cincinnati, Ohio.
Marine Metal & Supply Co., New York.
O'Brien Machinery Co., The, Phila., Pa.
Partridge, Arthur S., St. Louis, Mo.
Reading Engineering Wks., Reading, Pa.
- MACHINE TOOLS. (Used.)**
Delta Equipment Co., Philadelphia, Pa.
O'Brien Machinery Co., Philadelphia, Pa.
- MAIL CHUTES.**
Cutler Mail Chute Co., Rochester, N. Y.
- MARBLE (Producers and Manufacturers.)**
Georgia Marble Co., The, Tate, Ga.
- METAL Cutting Machinery.**
Earle Gear & Machine Co., Phila., Pa.
- METAL STAMPING.**
Gerding Bros., Cincinnati, O.
- MIXERS (Plaster and Mortar.)**
Dunning & Boschert Press Co., Syracuse, N. Y.
Jaeger Machine Co., Columbus, Ohio.
- MOTORS (Electric.)**
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Western Electric Co., New York City.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
- MOTOR TRUCKS.**
International Harvester Co. of America, Inc., Chicago, Ill.
- NAILS and Spikes.**
American Steel & Wire Co., Balto., Md.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- OIL (Fuel and Gas.)**
Gulf Refining Co., Pittsburgh, Pa.
- Cups.
Lunkenheimer Co., The, Cincinnati, O.
- ORE-WASHING MACHINERY.**
Georgia Iron Works, Augusta, Ga.
- ORNAMENTAL Iron Work.**
Austin Bros. Bridge Co., Atlanta, Ga.
Roanoke Iron & Bridge Wks., Roanoke, Va.
Snead Architectural Iron Works, Louisville, Ky.
Virginia Bridge & Iron Co., Roanoke, Va.
- PAINT (Preservative.)**
Cabot, Inc., Samuel, Boston, Mass.
- PARTITIONS (Sectionfold, Rolling, Wood.)**
Wilson Corp., The, J. G., New York.
- PATENT ATTORNEYS.**
Buck, Sterling P., Washington, D. C.
Coleman, Watson L., Washington, D. C.
Eaton, Paul B., Charlotte, N. C.
Sanett, Edward C., Washington, D. C.
Seymour & Bright, Washington, D. C.
- PAVING (Asphaltic Concrete.)**
Culbert & Sons, W. F., Marion, Va.
- PAVING Blocks (Creosoted Wood.)**
American Creosote Works, New Orleans.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
- PAVING BRICK.**
National Paving Brick Assn., Washington, D. C.
- PENSTOCKS.**
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
- PERFORATED METAL.**
Erdie Perforating Co., Rochester, N. Y.
Harrington & King Perft. Co., Chicago.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.
- PETROLEUM REFINERS.**
Gulf Refining Co., Pittsburgh, Pa.
- PIG-IRON.**
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- PILES, POSTS, Poles (Creosoted.)**
American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.
- PILING—(Steel Sheet.)**
Carnegie Steel Co., Pittsburgh, Pa.
- (Yellow Pine.)
Century Wood Preserving Co., Balto., Md.
- PIPE.**
Albert & Davidson Pipe Corp., Brooklyn, N. Y.
Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.
Central Pipe & Supply Co., Charleston, W. Va.
Greenpoint Iron & Pipe Co., Brooklyn, N. Y.
Maryland Pipe & Steel Corp., Baltimore, Md.
McDowell Pipe Corp., Brooklyn, N. Y.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Standard Piping & Fitting Co., Phila.
Tri State Pipe Co., Bellaire, Ohio.
- (Cast Iron.)
Cast Iron Pipe Research Assn., Chicago.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
- (Hammer-Welded.)
National Tube Co., Pittsburgh, Pa.
- (Second-Hand.)
Albert & Davidson Pipe Corp., Brooklyn, N. Y.
Albert Pipe Sup. Co., Brooklyn, N. Y.
Central Pipe & Sup. Co., Charleston, W. Va.
Greenpoint Iron & Pipe Co., Brooklyn, N. Y.
Marine Metal & Supply Co., New York.
Maryland Pipe & Steel Corp., Baltimore, Md.
McDowell Pipe Corp., Brooklyn, N. Y.
Tri State Pipe Co., Bellaire, Ohio.
- (Steel.)
Bethlehem Steel Co., Bethlehem, Pa.
National Tube Co., Pittsburgh, Pa.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Standard Piping & Fitting Co., Phila.
Youngtown Sheet & Tube Co., Youngstown, Ohio.
- PIPE (Fittings.)**
Georgia Iron Works, Augusta, Ga.
Standard Piping & Fitting Co., Phila.
- PIPE Machinery (Concrete.)**
Quinn Wire & Iron Works, Boone, Iowa.
- Unions and Joints.
Dart Mfg. Co., E. M., Providence, R. I.
- Systems (Industrial.)
Moore Pipe & Sprinkler Co., Jacksonville, Fla.
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.
Standard Piping & Fitting Co., Phila.
- PLATES (Steel and Iron.)**
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- POLES—(Tubular, Steel.)**
National Tube Co., Pittsburgh, Pa.
- (Yellow Pine.)
Century Wood Preserving Co., Balto., Md.
- POLISHING MACHINERY. (Wheels, Blocks.)**
Carborundum Co., Niagara Falls, N. Y.
- PORCH COLUMNS (Wood.)**
Schwerdt Mfg. Co., A. F., Pittsburgh.
- PORTLAND CEMENT.**
Alpha Portland Cement Co., Birmingham, Ala.
- PRESSES. (Baling, Cottonseed Oil, Hydraulic and Power.)**
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.
- PRINTERS (Book, Catalog, Job.)**
Smith & Son Co., Oscar T., Baltimore, Md.
Young & Selden Co., Baltimore, Md.
- PULVERIZERS. (See Crushing and Pulverizing Machinery.)**
- PUMPING MACHINERY.**
Fairbanks, Morse & Co., Chicago, Ill.
Layne & Bowler, Inc., Memphis, Tenn.
Myers & Bros. Co., The, F. E. Ashland, O.
Virginia Mch. & Well Co., Richmond, Va.
- PUMPS (Boiler Feed.)**
DeLaval Steam Turbine Co., Trenton, N. J.
Myers & Bros. Co., The, F. E. Ashland, O.
- (Centrifugal.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
DeLaval Steam Turbine Co., Trenton, N. J.
Fairbanks, Morse & Co., Chicago, Ill.
Layne & Bowler, Inc., Memphis, Tenn.
- (Deep Well.)
Layne & Bowler, Inc., Memphis, Tenn.
- (Hydraulic.)
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.
- (Pulverized Coal.)
Fuller Lehigh Co., Fullerton, Pa.
- (Sand and Dredging.)
Georgia Iron Works, Augusta, Ga.
- (Steam.)
Fairbanks, Morse & Co., Chicago, Ill.
- (Water Works.)
Layne & Bowler, Inc., Memphis, Tenn.
- PUNCHING and SHEARING MACHINERY.**
Bertsch & Co., Cambridge City, Ind.
- RADIATOR ENCLOSURES.**
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
- RAILROAD Equipment and Supplies (New.)**
Robinson & Orr, Pittsburgh, Pa.
- Equipment and Supplies. (Used.)
Dyer Co., W. R., St. Louis, Mo.
- Smith & Co., W. M., Birmingham, Ala.
Southern Iron and Equip. Co., Atlanta.
- RAILROAD (Frogs and Switches)**
Bethlehem Steel Co., Bethlehem, Pa.
Robinson & Orr, Pittsburgh, Pa.
- RAILROADS—(Offering Industrial, Agricultural and Commercial Opportunities.)**
Model Land Company, Flagler System, St. Augustine, Fla.
- RAILS (New and Used.)**
Carnegie Steel Co., Pittsburgh, Pa.
Dyer Co., W. R., St. Louis, Mo.
Robinson & Orr, Pittsburgh, Pa.
Smith & Co., W. M., Birmingham, Ala.
Southern Iron & Equip. Co., Atlanta, Ga.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- RAILWAYS (Marine.)**
Charleston Dry Dock and Machine Co., Charleston, S. C.
- RECEPTACLES (Self-Closing—Waste Paper.)**
Whitaker Paper Co., Baltimore, Md.
- REINFORCING for Concrete.**
American Steel and Wire Co., Balto., Md.
Austin Bros. Bridge Co., Atlanta, Ga.
Carnegie Steel Co., Pittsburgh, Pa.
- RIVER & HARBOR IMPROVEMENTS (Dredging, Decks, Wharves, etc.)**
Arundel Corp., Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.
- ROAD and Street Machinery.**
Austin-Western Road Machinery Co., Chicago, Ill.
Buffalo-Springfield Roller Co., Springfield, O.
Caterpillar Tractor Co., Peoria, Ill.
Gallion Iron Wks. & Mfg. Co., Gallion, O.
- and Street Material.
Boxley & Co., W. W., Roanoke, Va.
- Graders and Scrapers.
Austin-Western Road Machinery Co., Chicago, Ill.
Caterpillar Tractor Co., Peoria, Ill.
Gallion Iron Wks. & Mfg. Co., Gallion, O.
- Oils and Preservatives.
Gulf Refining Co., Pittsburgh, Pa.
- Rollers (Steam and Gasoline.)
Austin-Western Road Machinery Co., Chicago, Ill.
Buffalo-Springfield Roller Co., Springfield, O.
- Scarifiers.
Austin-Western Road Mchry. Co., Chicago, Ill.
Buffalo-Springfield Roller Co., Springfield, O.
- ROOFING (Asphalt Built-Up.)**
Barber Asphalt Co., Philadelphia, Pa.
- (Ready Prepared, Felt, Tar Asbestos, Asphalt.)
Ruberoid Co., New York City.
- ROOFING and Siding (Composition.)**
Ruberoid Co., New York City.
- (Metal.)
American Sheet and Tin Plate Co., Pittsburgh, Pa.
Gulf States Steel Co., Birmingham, Ala.
Youngstown Sheet and Tube Co., Youngstown, O.
- SAFES.**
York Safe & Lock Co., York, Penna.
- SAND.**
Arundel Corp., Baltimore, Md.
Friend & Co., Inc., Petersburg, Va.
- SANITARY Drinking Fountains.**
Bundie-Spence Mfg. Co., Milwaukee, Wis.
- SAWS (Cold Metal.)**
Earle Gear and Machine Co., Phila., Pa.
- SCALES (Auto Truck.)**
Fairbanks, Morse & Co., Chicago, Ill.
- SCRAP IRON and STEEL.**
Smith & Co., W. M., Birmingham, Ala.
- SCREEN CLOTH.**
Seneca Wire & Mfg. Co., Fostoria, Ohio.
- SCREENING (For Concrete and Road Construction.)**
American Limestone Co., Knoxville, Tenn.
- SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)**
Erdie Perforating Co., Rochester, N. Y.
Gründler Crusher & Pulverizer Co., St. Louis, Mo.
Harrington & King Perft. Co., Chicago.
Mundt & Sons, Charles, Jersey City, N. J.
- SCREW-Machine Products.**
Progressive Mfg. Co., Torrington, Conn.

SEAWALLS.

Shore-Line Builders, Inc., Jacksonville, Fla.

SEWAGE Disposal Systems.

D-N Corporation, New York, N. Y.

—Pipe (Vitrified.)Lee Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.**SEWER Pipe Machinery.**

Quinn Wire & Iron Works, Boone, Iowa.

SHAFTING Material (Tubular.)

National Tube Co., Pittsburgh, Pa.

SHARPENING Stones.

Carborundum Co., Niagara Falls, N. Y.

SHEET Steel and Iron.American Sheet and Tin Plate Co., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Youngstown Sheet & Tube Co., Youngstown, O.**—Metal Working Machinery.**

Bertch & Co., Cambridge City, Ind.

SHEETS (Asbestos.)

Ruberold Co., New York City.

—(Galvanized and Black.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.

SHINGLES (Asbestos.)

Ruberold Co., New York City.

SHIPBUILDING.

Charleston Dry Dock & Machine Co., Charleston, S. C.

SHOVELS (Steam, Gas and Electric Power.)Austin-Western Road Machinery Co., Chicago, Ill.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.**SILICATE OF SODA.**

Grasselli Chemical Co., Inc., Birmingham.

SITES (Manufacturing.)Associated Gas & Elec. System, New York, N. Y.
Crisp County Power Co., Cordale, Ga.
Galveston, Texas, City of.
Industrial Commission, Winston-Salem, N. C.
Model Land Company (Flagler System), St. Augustine, Fla.**SLINGS (Wire Rope.)**

American Steel & Wire Co., Chicago, Ill.

SPEED REDUCERS.

Berie Gear & Mach. Co., Phila., Pa.

SPIKES (Railroad, Ship.)Bethlehem Steel Co., Bethlehem, Pa.
Sweet's Steel Co., Williamsport, Pa.**SPRINGS (Machinery, Railway, Spiral Steel.)**

American Steel & Wire Co., Balto., Md.

—(Wire—All Kinds.)

American Steel & Wire Co., Balto., Md.

SPRINKLERS (Automatic Fire.)

Moore Pipe & Sprinkler Co., Jacksonville, Fla.

STACKS (Iron and Steel.)Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Hedges Walsh Weldner Co., Chattanooga.
Virginia Bridge & Iron Co., Roanoke, Va.**STAINS (Shingle, Woodwork.)**

Cabot, Inc., Samuel, Boston, Mass.

STAIR TREADS.

Central Iron & Steel Co., Harrisburg, Pa.

STANDPIPES.Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.**STATIONERS (Envelopes, Letter and Billheads, etc.)**Smith & Son Co., Oscar T., Balto., Md.
Young & Selden Co., Baltimore, Md.**STEAM (Specialties.)**

Lunkenheimer Co., The, Cincinnati, O.

STEEL.Bethlehem Steel Co., Bethlehem, Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.**—(Cold Rolled.)**

American Steel & Wire Co., Balto., Md.

—(Fabricators.)

United Welding Co., Middletown, O.

—(Tool, High Speed.)

Bethlehem Steel Co., Bethlehem, Pa.

STEEL Buildings (Designers and Builders.)American Bridge Co., Pittsburgh, Pa.
Belmont Iron Works, Philadelphia, Pa.
Carolina Steel & Iron Co., Greensboro, N. C.
McClintic-Marshall Corp., Bethlehem, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.**—Plate Construction (Riveted or Welded.)**Bristol Steel & Iron Works, Inc., Bristol, Va.
Carolina Steel & Iron Co., Greensboro, N. C.
Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Hedges Walsh Weldner Co., Chattanooga.
McClintic-Marshall Corp., Bethlehem, Pa.
United Welding Co., Middletown, O.**STOKERS (Mechanical.)**

Detroit Stoker Company, Detroit, Mich.

STRUCTURAL STEEL AND IRON.American Bridge Co., Pittsburgh, Pa.
Austin Bros. Bridge Co., Atlanta, Ga.
Belmont Iron Works, Philadelphia, Pa.
Bristol Steel & Iron Works, Inc., Bristol, Va.
Carnegie Steel Co., Pittsburgh, Pa.
Carolina Steel & Iron Co., Greensboro, N. C.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.
Speed Architectural Iron Works, Louisville, Ky.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.**SULPHATE OF ALUMINA.**

Grasselli Chemical Co., Inc., Birmingham.

SULPHIDE OF SODA.

Grasselli Chemical Co., Inc., Birmingham.

SURFACING (Roads and Streets)

Culbert & Sons, W. F., Marion, Va.

SURVEYS (Quantity.)

Spring, Charles Herbert, Greensboro, N. C.

SURVEYING INSTRUMENTS.

Weber Co., Inc., F., Philadelphia, Pa.

SWINGING ENGINES.

Dake Engine Co., Grand Haven, Mich.

SWITCHBOARDS, SWITCHES, ETC.General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**TANKS (Air Compressor.)**

Titusville Iron Works Co., Titusville, Pa.

—(Elevated Steel.)Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Cole Mfg. Co., E. D., Newman, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.**—(Elevated Wood.)**

Davis & Son, G. M., Palatka, Fla.

—(Iron and Steel.)American Bridge Co., Pittsburgh, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.**—(Storage, Oil, etc.)**Chicago Bridge & Iron Wks., Birmingham.
Finnigan Co., Inc., J. J., Atlanta, Ga.
McClintic-Marshall Corp., Bethlehem, Pa.
Titusville Iron Works Co., Titusville, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.
Westinghouse Traction Brake Co., Wilmerding, Pa.**—(Seamless Steel.)**

National Tube Co., Pittsburgh, Pa.

—(Wood.)Davis & Son, G. M., Palatka, Fla.
Virginia Mch. & Well Co., Richmond, Va.**TARPAULINS.**Atlanta Tent & Awning Co., East Point, Ga.
Fulton Bag & Cotton Mills, Atlanta, Ga.**TELEPHONE SERVICE.**

American Telephone & Telegraph Co.

TENTS.

Fulton Bag & Cotton Mills, Atlanta, Ga.

TEXTILE CHEMICALS.

Grasselli Chemical Co., Inc., Birmingham.

TILE (Floor.)

Hood Co., B. Mifflin, Daisy, Tenn.

—(Roof.)

Hood Co., B. Mifflin, Daisy, Tenn.

—(Sewer.)

Lee Clay Products Co., Clearfield, Ky.

TIN AND TERNE PLATES.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.

TOOLS and DIES.

Gerding Bros., Cincinnati, O.

TOWERS (Electric Transmission.)

American Bridge Co., Pittsburgh, Pa.

—(Steel and Wood.)Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Cole Mfg. Co., R. D., Newman, Ga.**TRACK (Portable or Permanent.)**Equipment Corp. of America, Chicago, Ill.
Sweet's Steel Co., Williamsport, Pa.**TRACTORS (Industrial.)**Caterpillar Tractor Co., Peoria, Ill.
International Harvester Co. of America, Inc., Chicago, Ill.**—(Road.)**

Caterpillar Tractor Co., Peoria, Ill.

TRAILERS (Arch-Girder, Heavy Duty.)

Wellman Engr. Co., Cleveland, O.

TRAMRAIL SYSTEMS (Hand or Electric.)

Cleveland Crane & Engr. Co., Wickliffe, O.

TRAMWAYS (Aerial Wire Rope.)

American Steel & Wire Co., Balto., Md.

TRANSFORMERS.

General Electric Co., Schenectady, N. Y.

—(Used.)Electric Service Co., Cincinnati, O.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**TRANSMISSION TOWERS**

McClintic-Marshall Corp., Bethlehem, Pa.

TRENCH MACHINERY. See Excavators (Trench.)**TRI-SODIUM PHOSPHATE.**

Grasselli Chemical Co., Inc., Birmingham.

TRUCKS (Motor.)

International Harvester Co. of America, Inc., Chicago, Ill.

TUBES (Boiler.) See Boiler Tubes.

National Tube Co., Pittsburgh, Pa.

TUBING (Seamless Steel.)

National Tube Co., Pittsburgh, Pa.

TURBINES (Steam.)Allis-Chalmers Mfg. Co., Milwaukee, Wis.
DeLaval Steam Turbine Co., Trenton, N. J.
General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**TURNABLES.**American Bridge Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.**UNIONS.**

Dart Mfg. Co., E. M., Providence, R. I.

VALVES.Lunkenheimer Co., The, Cincinnati, O.
Westinghouse Traction Brake Co., Wilmerding, Pa.**—(Acid Proof.)**

Lunkenheimer Co., The, Cincinnati, Ohio.

—(Gate.)

Lunkenheimer Co., The, Cincinnati, Ohio.

VAULTS (Bank and Safe Deposit.)

York Safe & Lock Co., York, Penna.

WAGONS (Crawlers.)

Austin-Western Road Mchry. Co., Chicago, Ill.

WARDROBES (Hygienic, School.)

Wilson Corp., The J. G., New York.

WATER HEATERS.

Finnigan Co., Inc., J. J., Atlanta, Ga.

WATER Purification.Bacharach & Co., E. W., Kansas City.
International Filter Co., Chicago, Ill.
Roberts Filter Mfg. Co., Darby (Phila.) Pa.**—Softening Apparatus (Purifying.)**American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.**—Works Supplies and Appliances.**Cast Iron Pipe Research Asso., Chicago.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
Layne & Bowler, Inc., Memphis, Tenn.**WELDING.**Charleston Dry Dock & Machine Co., Charleston, S. C.
Hedges Walsh Weldner Co., Chattanooga.
United Welding Co., Middletown, O.**WELDING APPARATUS (Electric Arc.)**General Electric Co., Schenectady, N. Y.
Layne & Bowler, Inc., Memphis, Tenn.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.**WELL CONTRACTORS (Oil, Artesian, etc.)**Layne & Bowler, Memphis, Tenn.
Virginia Mch. & Well Co., Richmond, Va.**WHEELS and AXLES.**

Carnegie Steel Co., Pittsburgh, Pa.

WINDOW WASHING EQUIPMENT (Tramrail.)

Cleveland Crane & Engr. Co., Wickliffe, O.

WIRE (All Kinds.)American Steel & Wire Co., Chicago.
Seneca Wire & Mfg. Co., Fostoria, O.**—(Barbed Wire, etc.)**

American Steel & Wire Co., Balto., Md.

—(Fence.)Cyclone Fence Co., Waukegan, Ill.
Stewart Iron Works Co., Cincinnati, O.**—(Flat and Round.)**

American Steel & Wire Co., Balto., Md.

WIRE Cloth (Iron, Steel, Copper, Brass, etc.)Harrington & King Perf. Co., Chicago.
Seneca Wire & Mfg. Co., Fostoria, O.**—Goods.**

Cyclone Fence Co., Waukegan, Ill.

—Rope (Transmission, Hoisting, Haulage.)American Cable Co., New York City.
American Steel & Wire Co., Chicago, Ill.
Hazard Wire Rope Co., Wilkes-Barre, Pa.**—Rope Clips.**

American Steel & Wire Co., Balto., Md.

—Stapling.

Seneca Wire & Mfg. Co., Fostoria, O.

—(Telephone and Telegraph.)

American Steel & Wire Co., Balto., Md.

—(Welding.)American Steel & Wire Co., Chicago, Ill.
Seneca Wire & Mfg. Co., Fostoria, O.**WOOD PRESERVATIVES.**

Century Wood Preserving Co., Boston.

WOOD TURNING (Columns, etc.)

Schwerdt Mfg. Co., A. F., Pittsburgh.

WOODWORK (Cabinet.)

Mitchell Mfg. Co., Robert, Cincinnati, O.

ZINC CHLORIDE.

Grasselli Chemical Co., Birmingham, Ala.

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BETTER NEWS

Signs of improvement in the business world are increasing, and as said elsewhere in this issue, the downward line of production and prices is tending to straighten out. In fact, the curve is upward in some instances. There has been a steady upturn in the bond market for several weeks past and better prices for shares. Commodity prices for the fifth consecutive week show a gain in the general average. The United States Bureau of Labor Statistics reports farm products have sustained an advance of 7.3 per cent. Livestock has been in greater demand at rising figures and the hog market has made a marked advance.

The Interstate Commerce Commission's agreement with a four-system consolidation plan for Class I Eastern railroads has helped the carrier situation. It will take some time to straighten out financial arrangements by which this epoch making move will take effect, but it is believed that some of the roads already closely linked financially may very soon coordinate some of their operations without waiting for the full completion of their capital amalgamation.

The situation in oil production is distinctly more encouraging. The Atlantic Refining Co. showed for the first six months of 1932 an increase of earnings over the same period last year and the Sun Oil Company's earnings for the second quarter were double those of the 1931 period.

There has been heavy buying, reported as coming from London, of American securities. Foreign interests have evidently considered that the tide is turning here so far as security values are concerned.

Department stores for two or three weeks past have reported increased sales.

Accounts of factories reopening and re-employment of labor in widely separated localities are multiplying.

All of this makes cheerful reading. Business appears to be on the road to recovery and to add to the encouragement, anyone who will examine the facts we are presenting in this issue, which compare conditions of today with those of twenty years ago, will see that the bottom has not dropped out of everything. On the contrary, while there has been ample ground for gloom by reason of the shock sustained, it is equally true that a very considerable volume of business is still being done and with unimpaired natural resources and the will to succeed, it is probable that before long definite improvement in our affairs will become more marked.

"THE SUCCESS of these merchandising plans requires an almost unlimited use of LONG DISTANCE"

W. K. Kellogg, President

KELLOGG COMPANY



THE Kellogg Company of Battle Creek, Mich., makers of cereals, is establishing one of the outstanding business records of recent years. Plants are operating on a 24-hour-a-day basis. The company is employing more people today than ever at this season.

Mr. W. K. Kellogg says: "The company has made progress and will continue to make progress through modern merchandising plans. The success of these plans requires an almost unlimited use of Long Distance telephone service."

Many companies which are successful in spite of unfavorable conditions consider Long Distance one of their important . . . and most economical . . . business-building aids. They know from experience that *increased* use of this modern service *lowers* costs in many ways, and helps to bring new business.

Like the Kellogg Company, these concerns use Long Distance in nearly every activity. Sales and advertising executives talk with field men throughout the country, discussing local problems, merchandising, packaging, special sales and advertising drives in various localities. The Purchasing Department saves money and time by using Long Distance. Traffic and production men use it to effect economies in their respective fields. Telephone conferences are often held between officials in different cities.

Your local Bell Telephone Company will gladly have a representative visit your office to explain how Long Distance gets results at low cost.

LONG DISTANCE RATES ARE LOW

Typical Station-to-Station Rates

From	To	Daytime	7 P. M.	8:30 P. M.
New York	Pittsburgh	\$1.50	\$1.25	\$.85
St. Louis	Cleveland	2.05	1.75	1.15
Boston	Detroit	2.55	2.10	1.40
Atlanta	Denver	4.50	3.75	2.50
San Francisco	Washington	8.50	6.75	5.00

Where the charge is 50 cents or more, federal tax applies

JUST CALL YOUR BELL



TELEPHONE BUSINESS OFFICE

MANUFACTURERS RECORD FOR